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## Search result

## Query

| Search done on      | 1.2.2009 (2:19h)  |
|---------------------|---|
| Search ID           | 10-594,140  |
| Database            | Metallic compounds  |
|                     | C:0.19-0.25*MN:1.1-1.5*SI:0.8-1.2*S:0.01-0.09*CR:1-1.4*MO:0.1-<br>0.25*NB:0.01-0.045*FE:BALANCE |
| Sorted according to | Date of publication descending  |

## Compositions

## Hits 102

|                 | ,   |                          |
|-----------------|---|--------------------------|
|                 |   |                          |
| 1               | Deutsches Patent- und Markenamt<br>DPMA   | 1.2.2009 (2:19h)         |
| Publication     | EP1764238 A1  | 21.03.2007               |
| Priority        | JP2004198329  | 05.07.2004               |
| Application     | EP0107200505765284  |                          |
| Applicant       | Sumitomo (Sei) Steel Wire Corp.; Sumitomo Ele   | ectric Tochigi Co., Ltd. |
| Inventor        | Sasabe, Hiroshi; Wakahara, Hitoshi; Okamoto, I  | K.                       |
| Title           | Annular concentrically twisted bead cord  |                          |
| Info            |   |                          |
| IPC             | C22C038/00  |                          |
| Composition nr. | 1   | Composite component b    |
| Composition     | Composite material [weight-%]: PLATTHERUNG * KERN Component a [weight-%]: AL: 3.5-15 * ZN: REST Component b [weight-%]: C: 0.08-0.27 * SI: 0.3-2 * MN: 0.5-2 * CR: 0.2-2 * AL: 0-0.1 * TI: 0- 0.1 * NB: 0-0.1 * V: 0-0.1 * B: 0-0.1 * MG: 0-0.1 * MO: 0-1 * NI: 0-2 * CO: 0-2 * W: 0-1 * P + S: 0-0.0333 * FE: REST |                          |
| Keywords        | (english)   | (german)                 |
|                 | COMPOSITE-MATERIAL  | VERBUNDW                 |
|                 | CORROSION-RESISTING   | KORROSIONSBEST           |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG          |
|                 |   | ll .                     |

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|                 | TENSILE-STRENGTH  | ZUGFEST                |
|-----------------|---|------------------------|
|                 | USE   | VERWENDUNG             |
|                 | WIRE  | DRAHT                  |
|                 |   |                        |
| 2               | Deutsches Patent- und Markenamt<br>DPMA   | 1.2.2009 (2:19h)       |
| Publication     | WO2006137460 A1   | 28.12.2006             |
| Priority        | JP2005185796  | 24.06.2005             |
| Application     | WO21062006JP2006312450  |                        |
| Applicant       | National Institute for Materials Science  |                        |
| Inventor        | Torizuka, Shiro; Nagai, Kotobu; Muramatsu, I  | Eijiro                 |
| Title           | High-strength self-tapping screw and process f  | for producing the same |
| Info            |   |                        |
| IPC             | C21D008/00  |                        |
| Composition nr. | I   | Composite component -  |
| Composition     | (weight-%); C : 0-0,6 * SI : 0-1,5 * MN : 0,15-1,8 * P : 0-0,015 * S : 0-0,015 * AL : 0-0,08 * CR + MO +NI + CU + TI + NB + V + B : 0-1 * FE : REST |                        |
| Keywords        | (english)   | (german)               |
|                 | FERRITE   | FERRIT                 |
|                 | HARD  | HART                   |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG        |
|                 | LAMINATE  | LAMINAT                |
|                 | SURFACE   | OBERFLÄCHE             |
|                 | TENSILE-STRENGTH  | ZUGFEST                |
|                 | TOUGH   | ZÄH                    |
|                 | USE   | VERWENDUNG             |
| 3               | Deutsches Patent- und Markenamt<br>DPMA   | 1.2.2009 (2:19h)       |
| Publication     | EP1652613 A2  | 03.05.2006             |
| Priority        | FR200411617   | 29.10.2004             |
| Application     | EP0510200505300792  | JL                     |
| Applicant       | Peugeot Citroen Automobiles SA  |                        |
| Inventor        | Richard, Pierre; Lanternier, Christan; Thiriet, Gilles  |                        |
| Title           | Procédé d'assemblage d'une piéce en acier et d  |                        |
| Info            | Baustahl, der mit Gußeisen verschweißt wird   | *                      |
| IPC             | B23K011/16  |                        |
| Composition     | 2   | Composite component -  |

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| Composition   | 0,333 * FE : REST  | CR + MO + V + NB + AL : (0)-8 * N + P + S : 0 |
|---|--|---|
| Keywords  | (english)  | (german)                                      |
|   | PRODUCTION   | HERSTELLUNG                                   |
|   | USE  | VERWENDUNG                                    |
|   | WELDABLE   | SCHWEISSBAR                                   |
| 4   | Deutsches Patent- und Markenamt<br>DPMA  | 1.2.2009 (2:19h)                              |
| Publication   | EP1642988 A1   | 05.04.2006                                    |
| Priority  | JP2003180290   | 20.05.2003                                    |
| Application   | EP2005200404734146   |   |
| Applicant   | National Institute for Materials Science Tsukul  | pa-Shi  |
| Inventor  | Torizuka, Shiro; Muramatsu, Eijiro; Inoue, Tao   | lanobu und Miterf.                            |
| Title   | Warm rolling method  |   |
| Info  |  |   |
| IPC   | C21D008/06   |   |
| Composition nr.   | 1  | Composite component -                         |
| Composition   | [weight-%]: C : 0.001-1,2 * SI : 0.1-2 * MN : 0,1-3 * P : 0-0,2 * S : 0-0,2 * AL : 0-1 * N : 0-0,2 * CR + MO + NI + CU : 0-30 * NB + V + TI : 0-0,5 * B : 0-0,01 * FE : REST |   |
| Keywords  | (english)  | (german)                                      |
|   | FINE-GRAINED   | FEINKÖRNIG                                    |
|   | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                               |
|   | PLASTIC  | PLASTISCH                                     |
|   | TENSILE-STRENGTH   | ZUGFEST                                       |
|   | USE  | VERWENDUNG                                    |
| 5   | Deutsches Patent- und Markenamt<br>DPMA  | 1.2.2009 (2:19h)                              |
|   | EP1640468 A1   | 29.03.2006                                    |
| Publication   | <u></u>  |   |
|   | JP2003151269   | 28.05.2003                                    |
| Priority  |  | 28.05.2003                                    |
| Priority<br>Application                                   | JP2003151269   | 28.05.2003                                    |
| Priority<br>Application<br>Applicant                      | IP2003151269<br>EP2605200404745326   | 28.05.2003                                    |
| Publication Priority Application Applicant Inventor Title | IP2003151269<br>  EP2605200404745326<br>  Sumitomo Metal Industries, Ltd.  | JI.   |
| Priority Application Applicant Inventor                   | JP2003151269 EP2605200404745326 Sumitomo Metal Industries, Ltd. Amaya, Hisashi; Arai, Yuji   | JI.   |
| Priority Application Applicant Inventor Title             | JP2003151269 EP2605200404745326 Sumitomo Metal Industries, Ltd. Amaya, Hisashi; Arai, Yuji   | JI.   |

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| Composition | [weight-%]: $C:0.05-0.45*SI:0.1-1.5*MN:0.1-3*P:0-0.03*S:0-0.01*AL:0-0.05*FE:REST*N:0-0.004*V:0-0.2+TI:0-0.1+NB:0-0.1+B:0-0.005*CR:0-1.5+MO:0-1+NI:0-1.5+CU:0-0.5*CR:0-1.00.005$  |                  |                         |
|-------------|--|------------------|-------------------------|
| Keywords    | (english)  | (german          | n)                      |
|             | CORROSION-RESISTING  | KORRO            | OSIONSBEST              |
|             | HEAT-TREATMENT   | WÄRM             | IEBEHANDLUNG            |
|             | PRODUCTION   | HERST            | ELLUNG                  |
|             | STRESS-CORROSION-RESIST  | SPANN            | UNGSKORROSIONSBEST      |
|             | USE  | VERWI            | ENDUNG                  |
|             | ]  |                  |                         |
| 6           | Deutsches Patent- und Markenamt  | DPMA             | 1.2.2009 (2:19h)        |
| Publication | EP1637619 A1   |                  | 22.03.2006              |
| Priority    | JP2003143764   |                  | 21.05.2003              |
| Application | EP2005200404734119   |                  |                         |
| Applicant   | Sumitomo Metal Industries, Ltd.  |                  |                         |
| Inventor    | Arai, Yuji; Kondo, Kunio   |                  |                         |
| Title       | Tube d'acier pour systeme de coussin de securite gonflable et procede de production associe  |                  |                         |
| Info        | 0.4 % <= Mn+40Ti <=1,2%  |                  |                         |
| IPC         | C22C038/00   |                  |                         |
| Composition |  |                  |                         |
| nr.         | 1  |                  | Composite component -   |
| Composition | weight-%]: C : 0,05-0,2 * SI : 0,1-1 * P : 0-0,025 * S : 0-0,1 * CR : 0,05-1 * AL : 0-0,1 * TT : 0-0,025 * N : 0-1,2 * M O : 0-0,5 * NI : 0-1,5 * V : 0-0,2 * B : 0-0,005 * CU : 0-0,5 * NB : 0-0,1 * CA : 0-0,01 * MG : 0-0,01 * REM : 0-0,01 * FE : REST * N : 0-0,3 |                  |                         |
| Keywords    | (english)  |                  | (german)                |
|             | HEAT-TREATMENT   |                  | WÄRMEBEHANDLUNG         |
|             | PRODUCTION   |                  | HERSTELLUNG             |
|             | TENSILE-STRENGTH   |                  | ZUGFEST                 |
|             | TOUGH  |                  | ZÄH                     |
|             | USE  |                  | VERWENDUNG              |
|             |  |                  |                         |
| 7           | Deutsches Patent- und Markenamt  | DPMA             | 1.2.2009 (2:19h)        |
| Publication | WO2006004530 A1  |                  | 12.01.2006              |
| Priority    | SE200401778  |                  | 02.07.2004              |
| Application | WO01072005SE200501087  |                  |                         |
| Applicant   | Höganäs AB   |                  |                         |
| Inventor    | Solimnjad, Naghi   |                  |                         |
| Title       | Powder metallurgical composition compris   | ing carbon black | as flow enhancing agent |
| Info        |  |                  |                         |
|             | ]<br>[B22F001/00   |                  |                         |
| IPC         | B22F001/00   |                  |                         |

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| Composition nr.    | 1  | Composite component -                                 |
|--------------------|--|---|
| Composition        | [weight-%]: C + GRAPHIT: 0,001-0,2 * CU + NI + CR + MN + SI + V + MO + P + W + S + NB: 0-5.555 * FE: REST  |   |
| Keywords           | (english)  | (german)  |
|                    | METAL-POWDER   | METALLPULVER  |
|                    | SINTERED-PRODUCT   | SINTERW   |
| 8                  | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                                      |
| Publication        | US20050247679 A1   | 10.11.2005  |
|                    | L  | 10.05.2004  |
| Priority           | US84351604   | 10.05.2004  |
| Application        | US1005200484351604   |   |
| Applicant          | Wang, Pei-Chung  |   |
| Inventor           | Wang, Pei-Chung  |   |
| Title              | Resistance welding of high strenght steels   |   |
| Info               |  |   |
| IPC                | B23K011/30   |   |
| Composition nr.    | 1  | Composite component -                                 |
| Composition        | [weight-%]: AL + CR + MO + NB + NI + P + S + SI + TI + V : 2-4 * C : 0.06-0.25 * MN : 0.4-1<br>* FE : REST |   |
| Keywords           | (english)  | (german)  |
|                    | CORROSION-RESISTING  | KORROSIONSBEST  |
|                    | ELECTRODE  | ELEKTRODE   |
|                    | FILLER-MATERIAL  | SCHWEISSZUSATZW                                       |
|                    | TENSILE-STRENGTH   | ZUGFEST   |
|                    | TOOL   | WERKZEUG  |
|                    |  | VI. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2             |
| 9                  | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                                      |
| Publication        | EP1577406 A1   | 21.09.2005  |
| Priority           | JP2002303657   | 17.10.2002  |
| Application        | EP1710200303808901   |   |
| Applicant          | National Institute for Materials Science   |   |
| Inventor           | Torizuka, Shiro; Nagai, Kotobu; Komatsu, Takafumi un   | d Miterf.   |
| Title              | Screw or tapping screw   |   |
| Info               |  |   |
| IPC                | C21D009/00   |   |
| Composition<br>nr. | 1  | Composite component -                                 |
|                    | weight-% : C : 0,001-1.2 * SI : 0-2 * MN : 0-3 * P :   | 0-0,2 * <b>S</b> : 0-0.02 * AL : 0-0,3 * N : 0-0,02 * |

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|                 | CR + MO + CU + N1 : 0-5 * NB + T1 + V : 0-0.5 * I  | 3:0-0,01 * FE : REST  |
|-----------------|--|-----------------------|
| Keywords        | (english)  | (german)              |
|                 | CASE-HARDENING   | EINSATZH              |
|                 | FERRITE  | FERRIT                |
|                 | FINE-GRAINED   | FEINKÖRNIG            |
|                 | HARD   | HART                  |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG       |
|                 | SURFACE  | OBERFLÄCHE            |
|                 | USE  | VERWENDUNG            |
|                 |  |                       |
| 10              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication     | US20050199322 A1   | 15.09.2005            |
| Priority        | JP2004067119   | 10.03.2004            |
| Application     | US220220056404905  |                       |
| Applicant       | JFE Steel Corp.  |                       |
| Inventor        | Nakamura, Nobuyuki; Fujita, Takeshi; Tsuchiya, Yoshir  | ro und Miterf.        |
| Title           | High carbon hot-rolled steel sheet and method for manu   | facturing the same    |
| Info            |  |                       |
| IPC             | C21D008/00   |                       |
| Composition nr. | 1  | Composite component - |
| Composition     | [weight-%]: C:0,1-0,7 * SI:0-2 * MN:0,2-2 * P:0-0,03 * S:0-0,03 * AL:0-0,1 * N:0-0,01 * CR:0-1,5 + MO:0-0,5 * B:0-0,005 + CU:0-1 + NI:0-1 + W:0-0,5 + TI:0-0,5 + NB:0-0,5 + V:0-0,5 + ZR:0-0,5 * FE:REST |                       |
| Keywords        | (english)  | (german)              |
|                 | FERRITE  | FERRIT                |
|                 | FINE-GRAINED   | FEINKÖRNIG            |
|                 | HARD   | HART                  |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG       |
|                 | PLASTIC  | PLASTISCH             |
|                 | PRECIPITATION-HARDENING  | AUSSCHEIDUNGSH        |
|                 | TENSILE-STRENGTH   | ZUGFEST               |
|                 | USE  | VERWENDUNG            |
|                 |  |                       |
| 11              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication     | EP1548142 A1   | 29.06.2005            |
| Priority        | JP2003429151   | 25.12.2003            |
| Application     | EP3011200404028368   |                       |
| Applicant       | Kabushiki Kaisha Kobe Seiko Sho  |                       |
| Inventor        | Nomura, Masahiro; Hashimoto, Ikurou; Omiya, Yoshino  | obu und Miterf.       |
|                 |  |                       |

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| Title              | High-strength cold-rolled steel sheet excellent in coating film adhesion  |                       |
|--------------------|---|-----------------------|
| Info               | Bemessungsregel: Si (Gew%) / Mn (Gew%) : <= 0,4   |                       |
| IPC                | C22C038/02  |                       |
| Composition nr.    | 1   | Composite component - |
| Composition        | [weight-%]: C : (0)-1 * SI : (0)-2 * MN : 1-5 * AL : 0-1 * N : 0-0.01 * O : 0-0.01 * CR : 0-1 * MO   0-1 * NI : 0-1 * TI : 0-0.1 * NB : 0-0.1 * V : 0-0.01 * P : 0-0.1 * B : 0-0.01 * S : 0-0.333 * FE : REST |                       |
| Keywords           | (english)   | (german)              |
|                    | ELASTIC   | ELASTISCH             |
|                    | FERRITE   | FERRIT                |
|                    | MARTENSITE  | MARTENSIT             |
|                    | PRODUCTION  | HERSTELLUNG           |
|                    | SURFACE   | OBERFLÄCHE            |
|                    | TENSILE-STRENGTH  | ZUGFEST               |
|                    | TOUGH   | ZÄH                   |
|                    | USE   | VERWENDUNG            |
|                    | WELDABLE  | SCHWEISSBAR           |
|                    |   |                       |
| 12                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| Publication        | EP1473375 A1  | 03.11.2004            |
| Priority           | JP2002029156  | 06.02.2002            |
| Application        | EP0502200303703170  |                       |
| Applicant          | Kabushiki Kaisha Kobe Seiko Sho   |                       |
| Inventor           | Nagao, Mamoru; Kochi, Takuya; Nomura, Masahiro und Miterf.  |                       |
| Title              | Steel wire excellent in descalability in mecanical descaling and method for production thereof  |                       |
| Info               | P+S ergänzt   |                       |
| IPC                | C22C038/00  |                       |
| Composition<br>nr. | 1   | Composite component - |
| Composition        | [weight-%]: $C: 0-1.1*SI: 0.05-0.8*MN: 0-2*CR: 0-2*MO: 0-0.6*CU: 0-2*NI: 0-4*TI: 0-0.1*N: 0-0.01*N: 0-0.03*V: 0-0.4*NB: 0-0.15*B: 0-0.005*P+S: 0-0.0333*FE: REST$   |                       |
| Keywords           | (english)   | (german)              |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG       |
|                    | SURFACE   | OBERFLÄCHE            |
|                    | USE   | VERWENDUNG            |
|                    | WIRE  | DRAHT                 |
|                    |   |                       |
| 13                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| Publication        | JP2004084074 AA   | 18.03.2004            |
| Priority           | JP2003408357  | 08.12.2003            |

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| Application        | JP081220032003408357  |                       |
|--------------------|---|-----------------------|
| Applicant          | JFE Steel K.K.  |                       |
| Inventor           | Takagi, Shusaku; Miura, Kazuya; Kato, Toshiyuki   |                       |
| Title              | Hot rolled sheet steel having excellent impact resistance   |                       |
| Info               |   |                       |
| IPC                | C22C038/00  |                       |
| Composition nr.    |   |                       |
| Composition        | $ \label{eq:weight-prop}                                   $  |                       |
| Keywords           | (english)   | (german)              |
|                    | FERRITE   | FERRIT                |
|                    | MARTENSITE  | MARTENSIT             |
|                    | PLASTIC   | PLASTISCH             |
|                    | PRODUCTION  | HERSTELLUNG           |
|                    | USE   | VERWENDUNG            |
|                    |   |                       |
| 14                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| Publication        | EP1382702 A1  | 21.01.2004            |
| Priority           | JP2002204168  | 12.07.2002            |
| Application        | EP1107200303254416  |                       |
| Applicant          | Kabushiki Kaisha Kobe Seiko Sho (Kobe Steel, Ltd)   |                       |
| Inventor           | Akamizu, Hiroshi; Makii, Koichi; Ikeda, Shushi  |                       |
| Title              | High-strength steel sheet having excellent workability and production process therefor  |                       |
| Info               |   |                       |
| IPC                | C22C038/02  |                       |
| Composition<br>nr. | 1   | Composite component - |
| Composition        | [weight-%]: C : 0.05-0.25 * SI : 0.5-3.5 * MN : 0.7-4 * P : 0-0.3 * S : 0-0.01 * AL : 0-2 * NI : 0-2 * CU : 0-2 * CR : 0-1 * MO : 0-1 * TI + NB + V : 0-0.1 * FE : REST |                       |
| Keywords           | (english)   | (german)              |
|                    | AUSTENITE   | AUSTENIT              |
|                    | FERRITE   | FERRIT                |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG       |
|                    | TENSILE-STRENGTH  | ZUGFEST               |
|                    | USE   | VERWENDUNG            |
|                    |   |                       |
|                    | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| 15                 |   |                       |
| 15<br>Publication  | EP1375683 A1  | 02.01.2004            |

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| Application        | EP2903200202713254   |                  |
|--------------------|--|------------------|
| Applicant          | Sumitomo Metal Industries, Ltd.  |                  |
| Inventor           | Kondo, Kunio; Yamamoto, Miyuki; Takano, Takashi und Miterfinder  |                  |
| Title              | High strength steel tube for air bag and method for productio  | n thereof        |
| Info               |  |                  |
| IPC                | C21D009/08   |                  |
| Composition<br>nr. | Composite component -  |                  |
| Composition        | [weight-%]: C : 0,05-0.2 * SI : 0,1-1 * MN : 0,2-2 * P : 0-0,025 * S : 0-0,01 * CR : 0.05-1 * AL : 0-0,1 * CU : 0-0,5 * TI : 0-0,5 * NB : 0-0,1 * V : 0-0,2 * CA : 0-0,01 * MG : 0-0,01 * REM : 0-0,01 * MO : 0-0,5 * NI : 0-1,5 * B : 0-0,005 * FE : REST |                  |
| Keywords           | (english)  | (german)         |
|                    | HEAT-TREATMENT   | WÄRMEBEHANDLUNG  |
|                    |  | ZUGFEST          |
|                    |  | ZÄH              |
|                    | USE  | VERWENDUNG       |
|                    |  |                  |
| 16                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h) |
| Publication        | EP1375820 A1   | 02.01.2004       |
| Priority           | JP2001066141   | 09.03.2001       |
| Application        | EP1103200202702882   |                  |
| Applicant          | Sumitomo Metal Industries Ltd.   |                  |
| Inventor           | Arai, Yuji; Kondo, Kunio; Amaya, Hisashi und Miterfinder   |                  |
| Title              | Steel pipe for use as embedded expanded pipe, and method of embedding oil-well steel pipe  |                  |
| Info               |  |                  |
| IPC                | C22C038/00   |                  |
| Composition nr.    | Composite component -  |                  |
| Composition        | weight-%]: C : 0,1-0,45 * SI : 0,1-1,5 * MN : 0,1-3 * P : 0-0,05 * S : 0-0,01 * AL : 0-0,5 * N : 0-0,01 * CA : 0-0,005 * CR : 0-1,5 * MO : 0-0,8 * V : 0-0,2 * TI : 0-0,05 * NB : 0-0,1 * FE : REST  |                  |
| Keywords           | (english)  | (german)         |
|                    | COMPOSITE-MATERIAL   | VERBUNDW         |
|                    | PLASTIC  | PLASTISCH        |
|                    | TENSILE-STRENGTH   | ZUGFEST          |
|                    | USE  | VERWENDUNG       |
|                    |  |                  |
| 17                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h) |
| Publication        | JP2003253384 AA  | 10.09.2003       |
| Priority           | JP2002060769   | 06.03.2002       |
| Application        | JP060320022002060769   |                  |

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| Applicant          | Aichi Steel Works Ltd.   |                       |
|--------------------|--|-----------------------|
| Inventor           | Mori, Kotaro   |                       |
| Title              | Hot-forged product with no lead added  |                       |
| Info               |  |                       |
| IPC                | C22C038/00   |                       |
| Composition<br>nr. | I  | Composite component - |
| Composition        | [%]: C:0.08-0.61 * SI:0.02-1 * MN:0.2-2 * S:0.08-0.35 * FE:REST * CR:0-2 + MO:0-1-<br>NI:0-3.5 + V:0-0.5 + NB:0-0.1 + TI:0-0.1 + B:0-0.01 + CA:0-0.02 + MG:0-0.02 + BI:0-0.3 +<br>TE:0-0.01 + SE:0-0.01 + ZR:0-0.01 + HF:0-0.1 + REM:0-0.1 |                       |
| Keywords           | (english)  | (german)              |
|                    | PRODUCTION   | HERSTELLUNG           |
|                    |  |                       |
| 18                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication        | WO2003012156 A1  | 13.02.2003            |
| Priority           | FR200109871  | 24.07.2001            |
| Application        | WO19072002FR200202596  |                       |
| Applicant          | ASCOMETAL  |                       |
| Inventor           | BADARD, ANDRE; DAGUIER, PASCAL; CHABRETO   | U. VALERIE            |
| Title              | METHOD FOR MAKING A MECHANICAL COMPONENT, AND RESULTING MECHANICAL COMPONENT   |                       |
| Info               |  |                       |
| IPC                | C22C03818  |                       |
| Composition nr.    | 1  | Composite component - |
| Composition        | (weight-%): C : 0,12-0,3 * SI : 0,8-1,5 * MN : 1-1,6 * CR : 0,4-1,6 * MO : 0-0,3 * N1 : 0-0,6 * AL   |                       |
| Keywords (english) |  | (german)              |
|                    | AUSTENITE  | AUSTENIT              |
|                    | FATIGUE-RESISTING  | SCHWINGFEST           |
|                    | PRODUCTION   | HERSTELLUNG           |
|                    | SURFACE  | OBERFLÄCHE            |
|                    | TENSILE-STRENGTH   | ZUGFEST               |
|                    | TOUGH  | ZÄH                   |
|                    | USE  | VERWENDUNG            |
|                    | ZEMENTITE  | ZEMENTIT              |
| 19                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication        | FR2827875 A1   | 31.01.2003            |
| Priority           | FR200109871  | 24.07.2001            |
|                    |  | <u> </u>              |

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| Application        | FR24072001200109871   |                       |
|--------------------|---|-----------------------|
| Applicant          | Ascometal Société anonyme   |                       |
| Inventor           | Badard, Andre; Daguier, Pascal; Chabretou, Valerie  |                       |
| Title              | Acier pour pieces mecaniques, et pieces mecaniques cementees ou carbonitrurees realisees a partir de cet acier  |                       |
| Info               |   |                       |
| IPC                | C22C038/18  |                       |
| Composition<br>nr. | 1   | Composite component - |
| Composition        | (weight-%): C : 0.12-0.3 * SI : 0.8-1.5 * MN : 1-1.6 * CR : 0.4-1.6 * MO : 0-0.3 * NI : 0-0.6 * AL 0-0.06 * CU : 0-0.3 * S : 0-0.1 * P : 0-0.03 * NB : 0-0.05 * TE : 0-0.02 * SE : 0-0.04 * PB : 0-0.07 * CA : 0-0.05 * B : 0-0.08 * N : 0-3.33 * FE : REST |                       |
| Keywords           | (english)   | (german)              |
|                    | AUSTENITE   | AUSTENIT              |
|                    | FATIGUE-RESISTING   | SCHWINGFEST           |
|                    | HARD  | HART                  |
|                    | HIGH-TEMPER-STRENGTH  | WARMFEST              |
|                    | SURFACE   | OBERFLÄCHE            |
|                    | TOUGH   | ZÄH                   |
|                    | USE   | VERWENDUNG            |
|                    | ZEMENTITE   | ZEMENTIT              |
|                    |   |                       |
| 20                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| Publication        | EP1277847 A1  | 22.01.2003            |
| Priority           | JP2001216990  | 17.07.2001            |
| Application        | EP0507200202015081  | ,                     |
| Applicant          | NISSAN MOTOR CO., LTD.  |                       |
| Inventor           | HANYUDA, TOMOKI; NAKAMURA, TUYOSHI; HAYASHI, TAKAO UND MITERFINDER  |                       |
| Title              | CASE HARDENING STEEL AND CARBURIZED PART  | T USING SAME          |
| Info               |   |                       |
| IPC                | C22C03800   |                       |
| Composition<br>nr. | 1   | Composite component - |
| Composition        | [weight-%]: C : 0,1-0,3 * SI : 0,3-1 * MN : 0,3-1,7 * P : 0-0,03 * S : 0-0,03 * MO : 0-1 * AL : 0-0,0 * N : 0-0,03 * FE : REST * CR : 0-1,6 * B : 0-0,005 * NB : 0-0,1 + TI : 0-0,1 * PB : 0-0,3 + BI : 0-0,15 + CA : 0-0,1                                 |                       |
| Keywords           | (english)   | (german)              |
|                    | AUSTENITE   | AUSTENIT              |
|                    | CASE-HARDENING  | EINSATZH              |
|                    | FINE-GRAINED  | FEINKÖRNIG            |
|                    | HARD  | HART                  |
|                    | SURFACE   | OBERFLÄCHE            |

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|                 | TOUGH  | ZÄH                          |  |
|-----------------|--|------------------------------|--|
|                 | 1  | л                            |  |
| 21              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)             |  |
|                 | WO2002103073 A2  |                              |  |
| Publication     | )(   | 27.12.2002                   |  |
| Priority        | JP2001181833   | 15.06.2001                   |  |
| Application     | WO14062002JP200205978  |                              |  |
| Applicant       | Nippon Steel Corp.; Suchiro, Masayoshi; Maki, Jun; Fu  | da, Masahiro und Mitanmelder |  |
| Inventor        | Suehiro, Masayoshi; Maki, Jun; Fuda, Masahiro und Mi   | terfinder                    |  |
| Title           | High-strength alloyed aluminum-system plated steel sheet and high-strength automotive part excellent in heat resistance and after painting corrosion resistance  |                              |  |
| Info            | Bemessungsregel  |                              |  |
| IPC             | C23C002/00   |                              |  |
| Composition nr. | 1  | Composite component b        |  |
| Composition     | Composite material [%]: PLATTIERUNG * KERN Component a [weight-%]: MN + CR : 0,101-1.11 * SI : 0-20 * ZN : 0-50 * MG : 0-10 * AL * FE : REST Component b [weight-%]: C : 0,05-0,7 * SI : 0,05-1 * MN : 0,2-3 * P : 0-0,1 * S : 0-0,1 * AL : 0-0,2 : TI : 0,01-0.8 + CR : (0)-3 + MO : (0)-1 * N : 0-0,1 * NB : 0-0.1 * V : 0-0,1 * NI : 0-1 * CU : 0-1 * B -0,0.03 * SN : 0-0.1 * SB : 0-0.1 * FE : REST |                              |  |
| Keywords        | (english)  | (german)                     |  |
|                 | CLADDING-MATERIAL  | PLATTIERW                    |  |
|                 | CORROSION-RESISTING  | KORROSIONSBEST               |  |
|                 | FERRITE  | FERRIT                       |  |
|                 | HARD   | HART                         |  |
|                 | HEAT-RESISTANT   | HITZEBEST                    |  |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG              |  |
|                 | PRODUCTION   | HERSTELLUNG                  |  |
|                 | TENSILE-STRENGTH   | ZUGFEST                      |  |
|                 | TOUGH  | ZÄH                          |  |
|                 | USE  | VERWENDUNG                   |  |
|                 |  |                              |  |
| 22              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)             |  |
| Publication     | JP2002363685 AA  | 18.12.2002                   |  |
| Priority        | JP2001171838   | 07.06.2001                   |  |
| Application     | JP070620012001171838   |                              |  |
| Applicant       | NKK CORP.  |                              |  |
| Inventor        | KIZU, TARO; NAGATAKI, YASUNOBU; TANAKA,  | YASUSHI                      |  |
| Title           | LOW YIELD RATIO HIGH STRENGTH COLD ROL   | LED STEEL SHEET              |  |
| Info            |  |                              |  |
| IPC             | C22C03800  |                              |  |
|                 | i e  |                              |  |

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| Composition nr. | 1  | Composite component - |
|-----------------|--|-----------------------|
| Composition     | [weight-%]: C : 0.016-0.2 * SI : 0-2 * MN : 0-2.5 * P : 0-0.1 * S : 0-0.01 * AL : 0-0.1 * N : 0-0.01 *<br>TI : 0.025-11 + NB : 0.01-1.5 + V : 0.01-1 * CU : 0-1 * MO : 0-1 * NI : 0-1 * CR : 0-1 * B : 0-0.01 *<br>FE : REST |                       |
| Keywords        | (english)  | (german)              |
|                 | FERRITE  | FERRIT                |
|                 | PRECIPITATION-HARDENING  | AUSSCHEIDUNGSH        |
|                 | TENSILE-STRENGTH   | ZUGFEST               |
|                 | USE  | VERWENDUNG            |
|                 | WELDABLE   | SCHWEISSBAR           |
|                 |  |                       |
| 23              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication     | EP1264910 A1   | 11.12.2002            |
| Priority        | JP2000052574   | 28.02.2000            |
| Application     | EP2802200101908167   |                       |
| Applicant       | NIPPON STEEL CORP.   |                       |
| Inventor        | FUJITA, NOBUHIRO; YOSHINAGA, NAOKI; TAKAHASHI, MANABU UND MITERFINDER  |                       |
| Title           | STEEL PIPE HAVING EXCELLENT FORMABILITY AND METHOD FOR PRODUCING THEREOF   |                       |
| Info            |  |                       |
| IPC             | C22C03800  |                       |
| Composition nr. |  |                       |
| Composition     |  |                       |
| Keywords        | (english)  | (german)              |
|                 | FERRITE  | FERRIT                |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG       |
|                 | PLASTIC  | PLASTISCH             |
|                 | TENSILE-STRENGTH   | ZUGFEST               |
|                 | TEXTURE  | TEXTUR                |
|                 | USE  | VERWENDUNG            |
|                 |  |                       |
| 24              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication     | WO2002061161 A1  | 08.08.2002            |
| Priority        | JP2001023401   | 31.01.2001            |
| Application     | WO31012002JP200200744  | 7.                    |
| Applicant       | KABUSHIKI KAISHA KOBE SEIKO SHO  |                       |
| Inventor        | KASHIMA, TAKAHIRO; HASHIMOTO, SHUNICHI; IKEDA, SHUSHI UND MITERFINDER  |                       |
|                 |  |                       |

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| Title                   | HIGH STRENGTH STEEL SHEET HAVING EXCELLENT FORMABILITY AND METHOD FOR PRODUCTION THEREOF  |                             |
|-------------------------|---|-----------------------------|
| Info                    |   | V 11                        |
| IPC                     | C22C03800   |                             |
| Composition<br>nr.      | 1   | Composite component -       |
| Composition             | weight-%]: C : 0.06-0.6 * SI + AL : 0.5-3 * MN : 0.5-3 * P : 0-0.15 * S : 0-0.02 * MO : 0-1 * NI : 0-0.5 * CU : 0-0.5 * CR : 0-1 * TI : 0-0.1 * NB : 0-0.1 * V : 0-0.1 * CA : 0-0.003 * REM : 0-0.003 * FE : REST                 |                             |
| Keywords                | (english)   | (german)                    |
|                         | AUSTENITE   | AUSTENIT                    |
|                         | BAINITE   | BAINIT                      |
|                         | FERRITE   | FERRIT                      |
|                         | HARD  | HART                        |
|                         | HEAT-TREATMENT  | WÄRMEBEHANDLUNG             |
|                         | MARTENSITE  | MARTENSIT                   |
|                         | PLASTIC   | PLASTISCH                   |
|                         | TENSILE-STRENGTH  | ZUGFEST                     |
|                         | USE   | VERWENDUNG                  |
|                         |   |                             |
| 25                      | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)            |
| Publication             | EP1209244 A   | 29.05.2002                  |
| Priority                | JP122323  | 24.04.2000                  |
| Application             | EP2304200101921983  |                             |
| Applicant               | KAWASAKI STEEL CORP.  |                             |
| Inventor                | KIMURA, TATSUMI/ MORIKAGE, YASUSHI/ AMC   | ONO, KENITI UND MITERFINDER |
| Title                   | LINEAR SHAPE STEEL EXCELLENT IN JOINT FATIGUE CHARACTERISTICS AND PRODUCTION METHOD THEREFOR  |                             |
| Info                    |   |                             |
| IPC                     | C22C03800   |                             |
| Composition nr.         | 1   | Composite component -       |
| Composition             | [weight-%]: C : 0.01-0.2 * SI : 0-0.8 * MN : 0-1.8 * P : 0-0.03 * S : 0-0.02 * FE : REST * CU : 0-1 NI : 0-1 + CR : 0-1 + MO : 0-0.5 + V : 0-0.1 + NB : 0-0.1 + B : 0-0.05 * AL : 0-0.1 * TI : 0-0.1 + CA : 0-0.01 + REM : 0-0.01 |                             |
| Keywords                | (english)   | (german)                    |
|                         | PRODUCTION  | HERSTELLUNG                 |
|                         |   |                             |
| 26                      | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)            |
| Publication             | JP2002080938 AA   | 22.03.2002                  |
| Priority JP2000273787 0 |   |                             |
| Priority                | JP2000273787  | 08.09.2000                  |

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| Application        |   |  |  |
|--------------------|---|--|--|
| Applicant          | NKK Corp.   |  |  |
| Inventor           | Kimura, Hideto; Yokoyama, Hiroyasu; Mitao, Shinji und Miterf.   |  |  |
| Title              | Rolled shape steel having excellent soil corrosion resistance and earthquake resistance and its production method   |  |  |
| Info               |   |  |  |
| IPC                | C22C038/00  |  |  |
| Composition<br>nr. | 2   | Composite component -  |  |
| Composition        | [weight-%]: CR: 0,5-2 * CU: 0.1-1 + NI: 0.1-2 + AL<br>0,005-0.3 + TI: 0.003-0,1 * C + MN + SI: 0-2,22 *   |  |  |
| Keywords           | (english)   | (german)   |  |
|                    | CORROSION-RESISTING   | KORROSIONSBEST   |  |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG  |  |
|                    | PRODUCTION  | HERSTELLUNG  |  |
|                    |   |  |  |
| 27                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)   |  |
| Publication        | WO0181642 A   | 01.11.2001   |  |
| Priority           | JP122323  | 24.04.2000   |  |
| Application        | WO23042001JP01/03436  |  |  |
| Applicant          | KAWASAKI STEEL CORP.  |  |  |
| Inventor           | KIMURA, TATSUMI/ AMANO, KENITI/ MORIKAGE, YASUSHI UND MITERFINDER   |  |  |
| Title              | LINEAR SHAPE STEEL EXCELLENT IN JOINT FATIGUE CHARACTERISTICS AND PRODUCTION METHOD THEREFOR  |  |  |
| Info               |   |  |  |
| IPC                | C22C03800   |  |  |
| Composition        | 1   | Composite component -  |  |
| nr.                | (weight-%): C : 0,01-0,2 * SI : 0-0,8 * MN : 0-1,8 * P : 0-0,03 * S : 0-0,02 * CU : 0-1 * NI : 0-1 *   CR : 0-1 * MO : 0-0,5 * V : 0-0,1 * NB : 0-0,1 * B : 0-0,003 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-0,01 * FE : REST |  |  |
|                    | CR:0-1*MO:0-0,5*V:0-0,1*NB:0-0,1*B:   |  |  |
| Composition        | CR:0-1*MO:0-0,5*V:0-0,1*NB:0-0,1*B:   |  |  |
| Composition        | CR : 0-1 * MO : 0-0,5 * V : 0-0,1 * NB : 0-0,1 * B : 0.01 * FE : REST   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-  |  |
| Composition        | CR: 0-1 * MO: 0-0.5 * V: 0-0.1 * NB: 0-0.1 * B: 0.01 * FE: REST<br>(english)  | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-  |  |
| Composition        | CR: 0-1 * MO: 0-0,5 * V: 0-0,1 * NB: 0-0,1 * B: 0.01 * FE: REST<br>(english)<br>EATIGUE-RESISTING   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-<br>  (german)  <br>  SCHWINGFEST                                   |  |
| Composition        | CR: 0.1 * MO: 0-0.5 * V: 0-0.1 * NB: 0-0.1 * B: 0.01 * FE: REST   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-  (german)  SCHWINGFEST  WÄRMEBEHANDLUNG                            |  |
| Composition        | CR: 0.1 * MO: 0.0.5 * V: 0.0.1 * NB: 0.0.1 * B: 0.01 * FE: REST  (english)  HEAT-TREATMENT  PLASTIC   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-<br>  (german)<br>  SCHWINGFEST<br>  WÄRMEBEHANDLUNG<br>  PLASTISCH |  |
| Composition        | CR: 0.1 * MO: 0.0,5 * V: 0.0,1 * NB: 0.0,1 * B: 0.01 * FE: REST (english) FATIGUE-RESISTING HEAT-TREATMENT PLASTIC TENSILE-STRENGTH   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-  [serman] SCHWINGFEST WÄRMEBEHANDLUNG PLASTISCH ZUGFEST            |  |
| Composition        | CR: 0.1 * MO: 0.0,5 * V: 0.0,1 * NB: 0.0,1 * B: 0.01 * FE: REST (english) FATIGUE-RESISTING HEAT-TREATMENT PLASTIC TENSILE-STRENGTH   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-  [serman] SCHWINGFEST WÄRMEBBEHANDLUNG PLASTISCH ZUGFEST           |  |
| Composition        | CR: 0-1 * MO: 0-0,5 * V: 0-0,1 * NB: 0-0,1 * B: 0,01 * FE: REST (english) FATIGUE-RESISTING HEAT-TREATMENT PLASTIC TENSILE-STRENGTH USE   | 0-0,005 * TI : 0-0,1 * CA : 0-0,01 * REM : 0-  [german] SCHWINGFEST WÄRMEBEHANDLUNG PLASTISCH ZUGFEST VERWENDUNG |  |

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| Application        | WO28022001JP01/01530  |                       |  |
|--------------------|---|-----------------------|--|
| Applicant          | NIPPON STEEL CORPORATION  |                       |  |
| Inventor           | FUJITA, NOBUHIRO / YOSHINAGA, NAOKI / TAKAHASHI, MANABU UND MITERFINDER   |                       |  |
| Title              | STEEL PIPE HAVING EXCELLENT FORMABILITY AND METHOD FOR PRODUCTION THEREOF   |                       |  |
| Info               |   |                       |  |
| IPC                | C22C03800   |                       |  |
| Composition<br>nr. | 1   | Composite component - |  |
| Composition        | [weight-%]: C : 0,0005-0,3 * SI : 0,001-2 * MN : 0,01-3 * N : 0-0,03 * P : 0-0,2 * S : 0-0,01 * AL : 0-0,5 * ZR : 0-0,5 * MG : 0-0,5 * TI : 0-0,5 * NB : 0-0,5 * HF : 0-2 * TA : 0-0,5 * V : 0-0,5 * B : 0-0,01 * CR : 0-1,5 * CU : 0-1,5 * NI : 0-1,5 * CO : 0-1,5 * W : 0-1,5 * CA : 0-0,5 * REM : 0-0,5 * FE : REST          |                       |  |
| Keywords           | (english)   | (german)              |  |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG       |  |
|                    | PLASTIC   | PLASTISCH             |  |
|                    | TEXTURE   | TEXTUR                |  |
|                    | USE   | VERWENDUNG            |  |
|                    |   |                       |  |
| 29                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |  |
| Publication        | JP2001214241 AA   | 07.08.2001            |  |
| Priority           | JP11-333127   | 24.11.1999            |  |
| Application        | JP060720002000204882  |                       |  |
| Applicant          | SUMITOMO METAL IND LTD.   |                       |  |
| Inventor           | WATARI, KOJI; OKADA, YASUTAKA   |                       |  |
| Title              | STEEL FOR MACHINE STRUCTURAL USE AND MACHINE STRUCTURAL PART EXCELLENT IN MACHINABILITY   |                       |  |
| Info               | TI*ZR < 0,04  |                       |  |
| IPC                | C22C03800   | W. M.                 |  |
| Composition nr.    | 1   | Composite component - |  |
| Composition        | [weight-%]: C : 0.05-0.55 * SI : 0.5-2.5 * MN : 0.15-2 * S : 0.08-0.2 * CR : 0-2 * P : 0-0.035 * V : 0.5 * N : 0-0.015 * AL : 0-0.04 * N1 : 0-2 * MO : 0-12.5 * B : 0-0.01 * BI : 0-0.1 * CA : 0-0.05 * PB : 0-0.12 * TI : 0-0.04 * ZR : 0-0.04 * TE : 0-0.05 * ND : 0-0.05 * NB : 0-0.1 * CU : 0-1.5 * SE : 0-0.5 * [FE : REST |                       |  |
| Keywords           | (english)   | (german)              |  |
|                    | FERRITE   | FERRIT                |  |
|                    | MACHINEABLE   | ZERSPANBAR            |  |
|                    |   |                       |  |
| 30                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |  |
|                    |   |                       |  |
| Publication        | EP1096029 A   | 02.05.2001            |  |

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| Application     | EP1904200000919136  |                                 |  |
|-----------------|---|---------------------------------|--|
|                 |   |                                 |  |
| Applicant       | KAWASAKI STEEL CORP.  |                                 |  |
| Inventor        | KOBAYASHI, TAKASHI/ SAKATA, KEI/ SHINOH/  |                                 |  |
| Title           | HIGH TENSILE HOT-DIP ZINC-COATED STEEL P.<br>METHOD FOR PRODUCTION THEREOF  | LATE EXCELLENT IN DUCTILITY AND |  |
| Info            |   |                                 |  |
| IPC             | C22C03800   |                                 |  |
| Composition nr. | I   | Composite component b           |  |
| Composition     | Composite material   % : PLATTIERUNG * KERN   Component a [weight-%]: ZN : 100   Component a [weight-%]: ZN : 100   Component b [weight-%]: C: 0.05-0.2 * SI : 0.3-1,8 * MN : 1-3 * FE : REST * CR + MO : 0-1 + COMPONENT   COMPONENT |                                 |  |
| Keywords        | (english)   | (german)                        |  |
|                 | AUSTENITE   | AUSTENIT                        |  |
|                 | CLADDING-MATERIAL   | PLATTIERW                       |  |
|                 | FERRITE   | FERRIT                          |  |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG                 |  |
|                 | MARTENSITE  | MARTENSIT                       |  |
|                 | PLASTIC   | PLASTISCH                       |  |
|                 | TENSILE-STRENGTH  | ZUGFEST                         |  |
|                 |   |                                 |  |
| 31              | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)                |  |
| Publication     | EP1069198 A   | 17.01.2001                      |  |
| Priority        | JP19888   | 28.01.1999                      |  |
| Application     | EP2501200000900930  |                                 |  |
| Applicant       | SUMITOMO METAL INDUSTRIES LTD.  |                                 |  |
| Inventor        | WATARI, KOJI / OKADA, YASUTAKA  |                                 |  |
| Title           | MACHINE STRUCTURAL STEEL PRODUCT  |                                 |  |
| Info            |   |                                 |  |
| IPC             | C22C03800   |                                 |  |
| Composition     |   |                                 |  |
| nr.             |   | Composite component -           |  |
| Composition     | [weight-%]: C : 0,05-0,55 * SI : 0,5-2,5 * MN : 0,01-2 * P : 0-0,035 * S : 0,005-0,2 * CU : 0-1,5 * CR : 0-2 * Nt : 0-2 * MO : 0-1,5 * V : 0-0,5 * NB : 0-0,1 * Tt : 0-0,04 * N : 0-0,01 * AL : 0-0,04 * N 0-0,015 * BI : 0-0,1 * CA : 0-0,05 * PB : 0-0,12 * TE : 0-0,05 * ND : 0-0,05 * SE : 0-0,5 * FE : REST  |                                 |  |
| Keywords        | (english)   | (german)                        |  |
| ,               | FERRITE   | FERRIT                          |  |
|                 | HARD  | HART                            |  |
|                 | MACHINEABLE ZERSPANBAR  |                                 |  |
|                 | TENSILE-STRENGTH  | ZUGFEST                         |  |
|                 | TOUGH   | ZÄH                             |  |

|                    | 1  | п                                 |  |
|--------------------|--|-----------------------------------|--|
| 32                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                  |  |
|                    |  |                                   |  |
| Publication        | JP01011574 A   | 16.01.2001                        |  |
| Priority           | JP177542   | 23.06.1999                        |  |
| Application        | JP2306199911-177542  |                                   |  |
| Applicant          | NIPPON STEEL CORP.   |                                   |  |
| Inventor           | SHIMAZU, TAKAHIDE/ OBA, SHIGEKAZU/ KANA  | YAMA, NOBUYUKI                    |  |
| Title              | HOT ROLLED STEEL SHEET FOR TV CATHODE-F  | RAY TUBE FRAME AND ITS PRODUCTION |  |
| Info               |  |                                   |  |
| IPC                | C22C03800  |                                   |  |
| Composition<br>nr. | I  | Composite component -             |  |
| Composition        | [weight-%]: C:0,05-0,2 * SI:0-2 * MN:0,3-3,2 * P:0-0,2 * S:0-0,03 * AL:0-1 * N:0-0,01 * B<br>0-0,01 * CR:0-2 * MO:0-1 * TI:0,03-0,4 + NB:0,01-0,2 + ZR:0,03-0,3 * FE: REST             |                                   |  |
| Keywords           | (english)  | (german)                          |  |
|                    | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                   |  |
|                    | HIGH-TEMPER-STRENGTH   | WARMFEST                          |  |
|                    | USE  | VERWENDUNG                        |  |
|                    |  |                                   |  |
| 33                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                  |  |
| Publication        | EP1031632 A  | 30.08.2000                        |  |
| Priority           | JP51799  | 26.02.1999                        |  |
| Application        | EP2402200000301483   |                                   |  |
| Applicant          | JAPAN AS REPRESENTED BY DIRECTOR GENERAL OF NATIONAL RESEARCH INSTITUTE<br>FOR METALS  |                                   |  |
| Inventor           | TORIZUKA, SHIRO/ UMEZAWA, OSAMU/ TSUZA   | KI, KANEAKI UND MITERFINDER       |  |
| Title              | PRODUCTION METHOD OF ULTRA FINE GRAIN S  | STEEL                             |  |
| Info               |  |                                   |  |
| IPC                | C21D00800  |                                   |  |
| Composition<br>nr. | 1  | Composite component -             |  |
| Composition        | (weight-%): C : 0-0.3 * SI : 0-2 * MN : 0-3 * P : 0-0.1 * S : 0-0.02 * N : 0-0,005 * CR : 0-3 * NI : 0<br>  3 * MO : 0-3 * CU : 0-3 * TI : 0-0.1 * NB : 0-0.05 * V : 0-0.2 * FE : REST |                                   |  |
| Keywords           | (english)  | (german)                          |  |
|                    | FERRITE  | FERRIT                            |  |
|                    | FINE-GRAINED   | FEINKÖRNIG                        |  |
|                    | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                   |  |
|                    | PLASTIC  | PLASTISCH                         |  |
|                    | PRODUCTION   | HERSTELLUNG                       |  |
|                    | USE  | VERWENDUNG                        |  |

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| 34              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)   |
|-----------------|--|--|
| Publication     | WO0044953 A  | 03.08.2000   |
| Priority        | JP19888  | 28.01.1999   |
| Application     | WO25012000JP00/00369   |  |
| Applicant       | SUMITOMO METAL INDUSTRIES LTD.   |  |
| Inventor        | WATARI, KOJI/ OKADA, YASUTAKA  |  |
| Title           | MACHINE STRUCTURAL STEEL PRODUCT   |  |
| Info            | BEMESSUNGSREGELN   |  |
| IPC             | C22C03800  |  |
| Composition nr. | 1  | Composite component -  |
| Composition     | [weight-%]: C : 0,05-0,55 * SI : 0,5-2,5 * MN : 0,01-<br>CU : 0-5 * NI : 0-2 * CR : 0-2 * MO : 0-5 * V : 0-5 *<br>0,04 * BI : 0-0,1 * CA : 0-0,05 * PB : 0-0,12 * TE : 0-0,<br>FE : REST | NB: 0-0.1*TI: 0-0.04*B: 0-0.01*AL: 0-0.01* |
| Keywords        | (english)  | (german)   |
|                 | HARD   | HART   |
|                 | MACHINEABLE  | ZERSPANBAR   |
|                 | USE  | VERWENDUNG   |
| 35              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)   |
| Publication     | DE19982874 T   | 22.06.2000   |
| Priority        | JP354327   | 14.12.1998   |
| Application     | WO14121999JP99/07018   | ,  |
| Applicant       | NIPPON STEEL CORP.   |  |
| Inventor        | MURAKI, TARO / HASEGAWA, YASUSHI / OKAM  | OTO, JUNICHI   |
| Title           | KESSELBAUSTAHL MIT AUSGEZEICHNETER ELEKTRISCHER SCHWEISSBARKEIT UND ELEKTRISCH GESCHWEISSTES KESSELBAUSTAHLROHR AUS DIESEM STAHL   |  |
| Info            |  |  |
| IPC             | C22C03800  |  |
| Composition nr. | 1  | Composite component -  |
| Composition     |  |  |
| Keywords        | (english)  | (german)   |
|                 | AUSTENITE  | AUSTENIT   |
|                 | CREEP-RESIST/STABILITY   | STANDFEST  |
|                 | FERRITE  | FERRIT   |

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|                    | MARTENSITE  | MARTENSIT                  |
|--------------------|---|----------------------------|
|                    | PERLITE   | PERLIT                     |
|                    | TOUGH   | ZÄH                        |
|                    | WELDABLE  | SCHWEISSBAR                |
|                    |   |                            |
| 36                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)           |
| Publication        | WO0018976 A   | 06.04.2000                 |
| Priority           | JP276034  | 29.09.1998                 |
| Application        | WO13081999JP99/04385  |                            |
| Applicant          | KAWASAKI STEEL CORP.  |                            |
| Inventor           | SUZUKI, YOSHITSUGU/ OSAWA, KAZUNORI/ KA   | TO, CHIAKI UND MITERFINDER |
| Title              | HIGH STRENGTH THIN STEEL SHEET, HIGH STR<br>STEEL SHEET, AND METHOD FOR PRODUCING T   |                            |
| Info               |   |                            |
| IPC                | C22C03838   |                            |
| Composition nr.    | 1   | Composite component -      |
| Composition        | weight-%}: C : 0.01-0.2 * SI : 0-1 * MN : 1-3 * P : 0-0.1 * S : 0-0.05 * AL : 0-0.1 * N : 0-0.01 * CR : 0-1 * MO : 0.001-1 * NB : 0-1 * V : 0-1 * TI : 0-1 * FE : REST  |                            |
| Keywords           | (english)   | (german)                   |
|                    | COMPOSITE-MATERIAL  | VERBUNDW                   |
|                    | CORROSION-RESISTING   | KORROSIONSBEST             |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG            |
|                    | SURFACE   | OBERFLÄCHE                 |
|                    | TENSILE-STRENGTH  | ZUGFEST                    |
|                    |   |                            |
| 37                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)           |
| Publication        | WO0006791 A   | 10.02.2000                 |
| Priority           | JP225176  | 27.07.1998                 |
| Application        | WO27071999JP99/04029  |                            |
| Applicant          | NIPPON STEEL CORP.  |                            |
| Inventor           | TAKAHASHI, MANABU/ AKISUE, OSAMU/ USUD  | A, MATSUO UND MITERFINDER  |
| Title              | FERRITE-BASED THIN STEEL SHEET EXCELLENT IN SHAPE FREEZING FEATURE AND MANUFACTURE METHOD THEREOF   |                            |
| Info               | VORLEG?*MN-AEQUIVALENT  |                            |
| IPC                | C22C03806   |                            |
| Composition<br>nr. | 2   | Composite component -      |
|                    | [weight-%]: C : 0.05-0.25 * SI : 0.01-2,5 * MN : 0.01-2,5 * P : 0-0,15 * S : 0-0,03 * AL : 0-1 * N : 0<br>0.01 * 0 : 0-0.007 * TI : 0-0.2 * NB : 0-0,2 * V : 0-0,2 * CR : 0-1 * B : 0-0,005 * MO : 0-1 * CU : 0<br>* NI : 0-1 * FE : REST |                            |
|                    | II  |                            |

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| Keywords           | (english)   | (german)                         |
|--------------------|---|----------------------------------|
|                    | TEXTURE   | TEXTUR                           |
|                    |   |                                  |
| 38                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)                 |
| Publication        | EP969112 A  | 05.01.2000                       |
| Priority           | JP82434   | 17.03.1997                       |
| Application        | EP1603199898907247  | , i                              |
| Applicant          | NIPPON STEEL CORPORATION  |                                  |
| Inventor           | UENISHI, AKIHIRO / TAKAHASHI, MANABU / KU   | RIYAMA, YUKIHISA UND MITERFINDER |
| Title              | DUAL-PHASE HIGH-STRENGTH STEEL SHEET H.<br>DEFORMATION PROPERTIES AND PROCESS FOR   |                                  |
| Info               | -   |                                  |
| IPC                | C22C03800   |                                  |
| Composition nr.    | 1   | Composite component -            |
| Composition        | (weight-%): C : 0.02-0.25 * MN + CR : 0.15-3.5 * SI + AL + P : 0.02-4 * NI + CU + MO : 0-3.5 * NB + TI + V : 0-0.3 * CA : 0-0.01 + REM : 0-0.05 * FE : REST * B : 0-0.01 + S : 0-0.01 + N : 0-0.02  |                                  |
| Keywords           | (english)   | (german)                         |
|                    | FERRITE   | FERRIT                           |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG                  |
|                    | MARTENSITE  | MARTENSIT                        |
|                    | PLASTIC   | PLASTISCH                        |
|                    | PRODUCTION  | HERSTELLUNG                      |
|                    | TENSILE-STRENGTH  | ZUGFEST                          |
|                    | TOUGH   | ZÄH                              |
|                    | WELDABLE  | SCHWEISSBAR                      |
|                    |   |                                  |
| 39                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)                 |
| Publication        | JP11286746 A  | 19.10.1999                       |
| Priority           | JP93436   | 06.04.1998                       |
| Application        | JP0604199810-93436  |                                  |
| Applicant          | SUMITOMO METAL IND LTD.   |                                  |
| Inventor           | UNO, MITSUO/ KAMATA, YOSHIHIKO/ SAKAMO  | TO, MASAKI                       |
| Title              | LOW DUCTILITY NON-HEAT TREATED STEEL E.   | XCELLENT IN MACHINABILITY        |
| Info               |   |                                  |
| IPC                | C22C03800   |                                  |
| Composition<br>nr. | 1   | Composite component -            |
| Composition        | [weight-%]: C : 0.2-0,7 * SI : 0-1,5 * MN : 0,3-2 * P : 0-0,15 * S : 0,002-0,2 * CU : 0-0,2 * NI : 0-0,5 * CR : 0.02-2 * MO : 0-0,5 * W : 0-0,5 * V : 0-0,5 * NB : 0-0,17 * TI : 0-0,5 * ZR : 0-0,5 * B : 0-4,0 * AL : 0-0,04 * N : 0-0,008 * PB : 0-0,3 * CA : 0-0,1 * FE : REST |                                  |

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| Keywords           | (english)   |            | (german)                           |
|--------------------|---|------------|------------------------------------|
|                    | MACHINEABLE   |            | ZERSPANBAR                         |
|                    |   |            |                                    |
| 40                 | Deutsches Patent- und Markenamt DPM   | <b>1</b> A | 1.2.2009 (2:19h)                   |
| Publication        | US5961748 C   |            | 05.10.1999                         |
| Priority           | JP203327  |            | 09.08.1995                         |
| Application        | US19071996684401  |            |                                    |
| Applicant          | NKK CORP.   |            |                                    |
| Inventor           | ONO, MORIAKI/ SHIOZAKI, TSUYOSHI/ OI  | IMURA, M   | ASANORI UND MITERFINDER            |
| Title              | LASER-WELDED STEEL PIPE   |            |                                    |
| Info               |   |            | A 11                               |
| IPC                | C22C03818   |            |                                    |
| Composition nr.    | I   |            | Composite component -              |
| Composition        | [weight-%]: C : 0.01-0.5 * SI : 0-1 * MN : 0.05-2 * P : 0-0.04 * S : 0-0.03 * N : 0-0.01 * AL : 0-0.1 * II : 0-0.1 * ZR : 0-0.1 * NB : 0-0.5 * V : 0-0.5 * NI : 0-2 * CU : 0-2 * MO : 0-2 * W : 0-2 * B : 0-0.005 * CA : 0-0.01 * MG : 0-0.01 * REM : 0-0.1 * CR : 0-6 * O : 0-0.03 * FE : REST |            | CU: 0-2 * MO: 0-2 * W: 0-2 * B: 0- |
| Keywords           | (english)   |            | (german)                           |
|                    | USE   |            | VERWENDUNG                         |
|                    | WELDABLE  |            | SCHWEISSBAR                        |
|                    |   |            |                                    |
| 41                 | Deutsches Patent- und Markenamt<br>DPMA   | 1.2.200    | 09 (2:19h)                         |
| Publication        | JP11236643 A  | 31.08.19   | 999                                |
| Priority           | JP43382   | 25.02.19   | 998                                |
| Application        | JP2502199810-43382  |            |                                    |
| Applicant          | SUMITOMO METAL IND LTD  |            |                                    |
| Inventor           | UNO, MITSUO / KAMATA, YOSHIHIKO / S.  | AKAMOTO    | ), MASAKI                          |
| Title              | LOW DUCTILITY NON-TEMPERING STEEL   |            |                                    |
| Info               |   |            |                                    |
| IPC                | C22C03800   |            |                                    |
| Composition<br>nr. |   |            | ite component -                    |
| Composition        | [weight-%]: C : 0,2-0,7 * SI : 0-1,5 * MN : 0,3-2 * P : 0-0,15 * S : 0-0,1 * CU : 0-0,2 * NI : 0-0,5 * CR : 0,02-2 * MO : 0-0,5 * V : 0-0,5 * NB : 0-0,17 * TI : 0-0,2 * B : 0-0,01 * AL : 0-0,02 * N : 0-0,05 * PB : 0-0,3 * FE : REST   |            |                                    |
| Keywords           | (english)   | (german    | .)                                 |
|                    | PRODUCTION  | HERST      | ELLUNG                             |
|                    |   |            |                                    |
| 42                 | Deutsches Patent- und Markenamt   |            |                                    |

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|                 | DPMA   | 1.2.2009 (2:19h)   |  |
|-----------------|--|--|--|
| Publication     | JP11131189 A   | 18.05.1999   |  |
| Priority        | JP125206   | 15.05.1997   |  |
| Application     | JP1505199810-133933  |  |  |
| Applicant       | KAWASAKI STEEL CORP.   |  |  |
| Inventor        | TOYOOKA, TAKAAKI/ YORIFUJI, AKIRA  | / NISHIMORI, MASANORI UND MITERFINDER  |  |
| Title           | STEEL PIPE AND ITS MANUFACTURE   |  |  |
| Info            |  |  |  |
| IPC             | C22C03800  |  |  |
| Composition nr. | 1  | Composite component -  |  |
| Composition     | [weight-%]: C : 0.005-0,3 * SI : 0,01-3 * M]<br>+ MO : 0-2,222 * V + TI + NB : 0-0,1111 *  | N: 0,01-2 * P: 0-0,0222 * S: 0-0,0111 * CU + CR + N<br>B + REM + CA: 0-0,0111 * FE: REST |  |
| Keywords        | (english)  | (german)   |  |
|                 | FERRITE  | FERRIT   |  |
|                 | FINE-GRAINED   | FEINKÖRNIG   |  |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG  |  |
|                 | PLASTIC  | PLASTISCH  |  |
|                 | STRESS-CORROSION-RESIST  | SPANNUNGSKORROSIONSBEST  |  |
|                 | TENSILE-STRENGTH   | ZUGFEST  |  |
|                 | TOUGH  | ZÄH  |  |
|                 | USE VERWENDUNG   |  |  |
| 43              | Deutsches Patent- und Markenamt<br>DPMA  | 1.2.2009 (2:19h)   |  |
| Publication     | JP11100641 A   | 13.04.1999   |  |
| Priority        | JP263684   | 29.09.1997   |  |
| Application     | JP290919979-263684   |  |  |
| Applicant       | KAWASAKI STEEL CORP.   | 1  |  |
| Inventor        | TAKAGI, SHUSAKU/ MURA, KAZUYA/ F   | URUKIMI, OSAMU UND MITERFINDER   |  |
| Title           | HOT ROLLED STEEL PLATE WITH COMPOSITE STRUCTURE, EXCELLENT IN IMPACT RESISTANCE AND FORMABILITY, AND ITS PRODUCTION  |  |  |
| Info            |  |  |  |
| IPC             | C22C03800  |  |  |
| Composition     | 1  | Composite component -  |  |
| nr.             | <u> </u>   | Composite component  |  |
| Composition     | [weight-%]: $C: 0.02-0.2*$ $SI: 0.1-2.5*$ $MN: 0.5-3*$ $S: 0-0.01*$ $P: 0.01-0.15+$ $CR: 0.003-2+$ $MO: 0.003-2*$ $FE: REST*$ $TI: 0-1*$ $NB: 0-0.5*$ $V: 0-1$ |  |  |
| Keywords        | (english)  | (german)   |  |
|                 | AUSTENITE  | AUSTENIT   |  |
|                 | FERRITE  | FERRIT   |  |

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|                    | HARD   | HART   |
|--------------------|--|--|
|                    | MARTENSITE   | MARTENSIT  |
|                    | TOUGH  | ZÄH  |
|                    |  |  |
| 44                 | Deutsches Patent- und Markenamt<br>DPMA  | 1.2.2009 (2:19h)   |
| Publication        | JP11012684 A   | 19.01.1999   |
| Priority           | JP163017   | 19.06.1997   |
| Application        | JP190619979-163017   | ,  |
| Applicant          | KOBE STEEL LTD   |  |
| Inventor           | YASUKI, SHINICHI / MATSUSHIMA, YOS   | HITAKE   |
| Title              | CASE HARDENING STEEL FOR COLD FO   | RGING  |
| Info               |  |  |
| IPC                | C22C03800  |  |
| Composition nr.    | 1  | Composite component -  |
| Composition        | [weight-%]: C + SI + MN : 0-2,22 * P + S : REST  | : 0-0,33 * CR + MO + V + TI + NB : 0-2,22 * FE :   |
| Keywords           | (english)  | (german)   |
|                    | CASE-HARDENING   | EINSATZH   |
|                    | FERRITE  | FERRIT   |
|                    | PERLITE  | PERLIT   |
|                    | PLASTIC  | PLASTISCH  |
|                    | WEAR/TEAR  | VERSCHLEISS  |
|                    |  |  |
| 45                 | Deutsches Patent- und Markenamt<br>DPMA  | 1.2.2009 (2:19h)   |
| Publication        | US5759299 A  | 02.06.1998   |
| Priority           | JP96539  | 10.05.1994   |
| Application        | US29071996682800   | ·  |
| Applicant          | NKK CORP.  |  |
| Inventor           | YOKOYAMA, HIROYASU/ YAMAMOTO,  | SADAHIRO/ KOBAYASHI, KAZUTAKA  |
| Title              | RAIL HAVING EXCELLENT RESISTANCE<br>HAVING EXCELLENT TOUGHNESS AND<br>MANUFACTURING THE SAME | ETO ROLLING FATIGUE DAMAGE AND RAILL<br>WEAR RESISTANCE AND METHOD OF                        |
| Info               |  |  |
| IPC                | C21D00800  |  |
| Composition<br>nr. | 1  | Composite component -  |
| Composition        | [weight-%]: C:0,15-0,45 * SI:0,05-1 * MI<br>0.005-2,05 * FE: REST * NB:0-0,01 + V:           | N: 0,1-2,5 * P: 0-0,03 * S: 0-0,03 * CR: 0,1-3 * MO: 0-0,05 + TI: 0-0,01 * CU: 0-2 + NI: 0-2 |
|                    | T  |  |

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| Keywords          | (english)  | (german      | )  |
|-------------------|--|--------------|--|
|                   | FATIGUE-RESISTING  | SCHWI        | NGFEST                                     |
|                   | HARD   | HART         |  |
|                   | TENSILE-STRENGTH   | ZUGFE        | ST   |
|                   | TOUGH  | ZÄH          |  |
|                   | WEAR/IEAR  | VERSC        | HLEISS                                     |
|                   |  |              |  |
| 46                | Deutsches Patent- und Markenamt DPMA   | ı            | 1.2.2009 (2:19h)                           |
| Publication       | US5759299 A  |              | 02.06.1998                                 |
| Priority          | JP96539  |              | 10.05.1994                                 |
| Application       | US29071996682800   |              | -  |
| Applicant         | NKK CORP.  |              |  |
| Inventor          | YOKOYAMA, HIROYASU/ YAMAMOTO, SAI  | DAHIRO/      | KOBAYASHI, KAZUTAKA                        |
| Title             | RAIL HAVING EXCELLENT RESISTANCE TO<br>HAVING EXCELLENT TOUGHNESS AND WE<br>MANUFACTURING THE SAME |              |  |
| Info              |  |              |  |
| IPC               | C21D00800  |              |  |
| Composition nr.   | 2  |              | Composite component -                      |
| Composition       | [weight-%]: C:0,2-0,5 * SI:0,1-2 * MN:1-4<br>* NI:0-1 * MO:0-1 * NB:0-0,1 * V:0-0,1                | * P : 0-0,   | 035 * S : 0-0,035 * CR : 0,3-4 * FE : REST |
| Keywords          | (english)  |              | (german)                                   |
|                   | FATIGUE-RESISTING  |              | SCHWINGFEST                                |
|                   | HARD   |              | HART                                       |
|                   | TENSILE-STRENGTH   |              | ZUGFEST                                    |
|                   | TOUGH  |              | ZÄH  |
|                   | WEAR/TEAR  |              | VERSCHLEISS                                |
| 47                | Deutsches Patent- und Markenamt DPMA   |              | 1.2.2009 (2:19h)                           |
| Publication       | US5676772 A  |              | 14.10.1997                                 |
| Priority          | JP226529   |              | 04.09.1995                                 |
| Application       | US19121995575164   |              | O4.09.1993                                 |
| Application       | NKK CORP.  |              |  |
|                   |  | A TITE A / X | AMAMOTO CADAITIDO                          |
| Inventor<br>Title | KOBAYASHI, KAZUTAKA/ FUJIKAKE, MASA  |              |  |
|                   | HIGH-STRENGTH, BAINITIC STEEL RAIL HA  | A VING E     | ACELLENT DAMAGE-RESISTANCE                 |
| Info              | lenzenzana   |              |  |
| IPC               | C22C03818  |              | 1  |
| Composition nr.   | 1  |              | Composite component -                      |
|                   |  |              |  |

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| Composition     | [weight-%]: C:0,2-0,5 * SI:0,1-2 * MN:0,3-4 * P<br>MO:0-1 + NB:0-0,2 + V:0-0,2 * FE: REST  | : 0-0,035 * S : 0-0,035 * CR : 0,3-4 * NI : 0-1 +    |
|-----------------|--|--|
| Keywords        | (english)  | (german)   |
|                 | HARD   | HART   |
|                 | TENSILE-STRENGTH   | ZUGFEST  |
|                 | WEAR/TEAR  | VERSCHLEISS  |
|                 |  |  |
| 48              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                                     |
| Publication     | DE69728076 T2  | 06.08.1997   |
| Priority        | FR9601525  | 08.02.1996   |
| Application     | DE0801199769728076   |  |
| Applicant       | Ascometal (S.A.)   |  |
| Inventor        | Bellus, Jacques; Jolly, Pierre; Pichard, Claude und Mite   | rfinder  |
| Title           | Herstellungsverfahren eines Stahlschmiedestücks  |  |
| Info            |  | 1 111  |
| IPC             | C22C038/20   |  |
| Composition nr. | 1  | Composite component -                                |
| Composition     | [weight-%]: C : 0,1-0,4 * SI : 0,15-1,7 * MN : 1-1,8 * CU : 0-0,35 * AL : 0,005-0,06 + B : 0,0005-0,01 + TI + CA : 0-0,006 + TE : 0-0,03 + SE : 0-0,05 + BI : 0-0,05 | : 0.005 - 0.01 + NB : 0.005 - 0.06 + S : 0.005 - 0.1 |
| Keywords        | (english)  | (german)   |
|                 | BAINITE  | BAINIT   |
|                 | FERRITE  | FERRIT   |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                                      |
|                 | PERLITE  | PERLIT   |
|                 | PLASTIC  | PLASTISCH  |
|                 | USE  | VERWENDUNG   |
| 49              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                                     |
| Publication     |  | 06.08.1997   |
|                 | EP787812 A   |  |
| Priority        | FR9601525  | 08.02.1996   |
| Application     | EP0801199797400025   |  |
| Applicant       | ASCOMETAL (SOCIETE ANONYME)  |  |
| Inventor        | BELLUS, JACQUES / JOLLY, PIERRE / PICHARD, O   |  |
| Title           | ACIER POUR LA FABRICATION DE PIECE FORGE<br>PIECE FORGEE   | EE ET PROCEDE DE FABRICATION D UNE                   |
| Info            |  |  |
| IPC             | C22C03820  |  |
| Composition nr. | 1  | Composite component -                                |

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|   | * CU : 0-0.35 * AL : 0-0,065 * B : 0-0,01 * TI : 0-0.03 *   |   |
|---|---|---|
|   | 0-0,03 * SE : 0-0,05 * BI : 0-0,05 * PB : 0-0,1 * FE : R  | REST  |
| Keywords  | (english)   | (german)  |
|   | FERRITE   | FERRIT  |
|   | HEAT-TREATMENT  | WÄRMEBEHANDLUNG                                     |
|   | MACHINEABLE   | ZERSPANBAR  |
|   | PERLITE   | PERLIT  |
|   | PLASTIC   | PLASTISCH   |
|   | TENSILE-STRENGTH  | ZUGFEST   |
|   | USE   | VERWENDUNG  |
|   |   |   |
| 50  | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)                                    |
| Publication   | JP09194997 A  | 29.07.1997  |
| Priority  | JP1725  | 09.01.1996  |
| Application   | JP090119968-1725  |   |
| Applicant   | NKK CORP.   |   |
| Inventor  | IWASAKI, KENICHI/ NAGAHAMA, YUTAKA/ SAT   | O, AKIO UND MITERFINDER                             |
| Title   | WELDED STEEL TUBE AND ITS PRODUCTION  |   |
| Info  |   |   |
| IPC   | C22C03800   |   |
| Composition   | 1   |   |
| nr.   | 1   | Composite component -                               |
|   | [weight-%]: C:0,01-0,5 * SI:0-1 * MN:0,5-2 * P:   |   |
| Composition   | T1: 0-0,2 * ZR: 0-0,2 * NB: 0-0,2 * V: 0-0,2 * NI: 0  |   |
|   | W: 0-1,5 * B: 0-0,005 * CA: 0-0,01 * MG: 0-0.01 * S   |   |
| ** 1  |   |   |
| Keywords  | (english)   | (german)  |
| Keywords  | USE   | VERWENDUNG  |
| Keywords  |   |   |
|   | USE<br>WELDABLE   | VERWENDUNG<br>SCHWEISSBAR                           |
| 51  | USE WELDABLE Deutsches Patent- und Markenamt DPMA   | VERWENDUNG   SCHWEISSBAR   [1.2.2009 (2:19h)        |
| 51<br>Publication   | USE WELDABLE  Deutsches Patent- und Markenamt DPMA [P09194998 A   | VERWENDUNG SCHWEISSBAR  1.2.2009 (2:19h) 29.07.1997 |
| 51 Publication Priority   | USE WELDABLE  Deutsches Patent- und Markenamt DPMA pp09194998 A pp1726  | VERWENDUNG   SCHWEISSBAR   [1.2.2009 (2:19h)        |
| 51 Publication Priority Application                               | USE WELDABLE  Deutsches Patent- und Markenamt DPMA IP09194998 A IP1726 IP090119968-1726   | VERWENDUNG SCHWEISSBAR  1.2.2009 (2:19h) 29.07.1997 |
| 51 Publication Priority Application Applicant                     | USE WELDABLE  Deutsches Patent- und Markenamt DPMA JP09194998 A JP1726 JP090119968-1726 NKK CORP.   | VERWENDUNG   SCHWEISSBAR                            |
| 51 Publication Priority Application Applicant Inventor            | USE WELDABLE  Deutsches Patent- und Markenami DPMA [PP9194998 A [P1726 [P090119968-1726 NKK CORP. [WASAKI, KENICHI/ NAGAHAMA, YUTAKA/ SAT                     | VERWENDUNG   SCHWEISSBAR                            |
| Publication Priority Application Applicant Inventor               | USE WELDABLE  Deutsches Patent- und Markenamt DPMA JP09194998 A JP1726 JP090119968-1726 NKK CORP.   | VERWENDUNG   SCHWEISSBAR                            |
| 51 Publication Priority Application Applicant Inventor Title Info | USE WELDABLE  Deutsches Patent- und Markenamt DPMA JP09194998 A JP1726  NKK CORP. IWASAKI, KENICHU NAGAHAMA, YUTAKA/ SAT WELDED STEEL TUBE AND ITS PRODUCTION | VERWENDUNG   SCHWEISSBAR                            |
| 51 Publication Priority Application Applicant Inventor Title      | USE WELDABLE  Deutsches Patent- und Markenami DPMA [PP9194998 A [P1726 [P090119968-1726 NKK CORP. [WASAKI, KENICHI/ NAGAHAMA, YUTAKA/ SAT                     | VERWENDUNG   SCHWEISSBAR                            |

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| [weight-%]: C:0,01-0,5 * SI:0-0,99 * MN:0,5-2 * P:<br>*TI:0-0,2 * ZR:0-0,2 * NB:0-0,2 * V:0-0,2 * NI:0-<br>W:0-1,5 * B:0-0,005 * CA:0-0.01 * MG:0-0,01 * SEL | 1,5 * CU : 0-1,5 * CR : 0-3 * MO : 0-1,5 *  |
|--|---|
| (english)  | (german)  |
| USE  | VERWENDUNG  |
| WELDABLE   | SCHWEISSBAR   |
|  |   |
| Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)  |
| JP09176785 A   | 08.07.1997  |
| JP338557   | 26.12.1995  |
| JP261219957-338557   |   |
| SUMITOMO METAL IND LTD.  |   |
| UNO, MITSUO/ SAKAMOTO, MASAKI  |   |
| NON-HEAT TREATED STEEL WITH HIGH STRENGT   | H AND LOW DUCTILITY   |
| SI+2V-0,5>0; SI+2V+5P-0,8>0; N-0,1AL-0,002>0; N-0,31<br>0,002>0; C+0,1SI+0,2MN+5CR/22+1,65V-5S/7-0,8>0   | FI<0; N-0,5AL-0,3TI-0,15NB-0,3V-1,3B-   |
| C22C03800  |   |
| 1  | Composite component -   |
| [weight-%]: C:0,2-0,7 * SI:0-1,5 * MN:0,3-2 * P:0-<br>CR:0,02-2 * MO:0-0,5 * V:0-0,5 * NB:0-0,17 * TI<br>* PB:0-0,3 * FE:REST                                |   |
| (english)  | (german)  |
| TENSILE-STRENGTH   | ZUGFEST   |
| USE  | VERWENDUNG  |
|  |   |
| Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)  |
| JP09111396 A   | 28.04.1997  |
| JP263277   | 11.10.1995  |
| JP111019957-263277   |   |
| KAWASAKI STEEL CORP.   |   |
| TAKAGI, SHUSAKU/ MIURA, KAZUYA/ KATO, TOSI   | HYUKI   |
| HIGH TENSILE STRENGTH HOT ROLLED STEEL PLA<br>COLD ROLLED STEEL SHEET FOR AUTOMOBILE US<br>RESISTANCE, AND THEIR PRODUCTION                                  |   |
|  |   |
|  |   |
| C22C03800  |   |
| C22C03800  | Composite component -   |
|  | **TI: 0-0.2 * ZR: 0-0.2 * NB: 0-0.2 * V: 0-0.2 * NI: 0-0.01 * SEI (english)  USE  WEULDABLE  Deutsches Patent- und Markenamt DPMA  IP99176785 A  IP338557  IP261219957-338557  SUMITOMO METAL IND LTD.  UNO, MITSUO/ SAKAMOTO, MASAKI  NON-HEAT TREATED STEEL WITH HIGH STRENGT  SI+2V-0,5-0: SI+2V+5P-0,8-0; N-0,1AL-0,002-0; N-0,3' 0,002-0; C+0,1SI+0,2MN+5CR/22+1,65V-58/7-0,8-0  [weight-%]: C: 0,2-0,7 * SI: 0-1,5 * MN: 0,3-2 * P: 0 CR: 0,02-2 * MO: 0-0,5 * V: 0-0,5 * NB: 0-0,17 * TI * PB: 0-0,3 * FE: REST    Cenglish    TENSILE-STRENGTH   USE    Deutsches Patent- und Markenamt DPMA   IP99111396 A   IP9911397 A   IP9911397 A   IP9111019957-263277   KAWASAKI STEEL CORP.   TAKAGI, SHUSAKU/ MIURA, KAZUYA/ KATO, TOSI HIGH TENSILE STRENGTH HOT ROLLED STEEL, PL. COLD ROLLED STEEL, PLETF FOR AUTOMOBILE U |

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|  | MO : 0,1-1 * TI : 0,03-1 + NB : 0,01-0,2 * FE : REST   |  |
|--|--|--|
| Keywords   | (english)  | (german)   |
|  | FERRITE  | FERRIT   |
|  | MARTENSITE   | MARTENSIT  |
|  | PLASTIC  | PLASTISCH  |
|  | TENSILE-STRENGTH   | ZUGFEST  |
|  | TOUGH  | ZÄH  |
| 54   | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)   |
| Publication  | US5594186 C  | 14.01.1997   |
| Priority   | US501670   | 12.07.1995   |
| Application  | US12071995501670   |  |
| Applicant  | MAGNETICS INTERNATIONAL INC.   |  |
| Inventor   | KRAUSE, ROBERT/ BULARZIK, JOSEPH/ KOKAL, HA  | AROLD  |
| Title  | HIGH DENSITY METAL COMPONENTS MANUFACTU  |  |
| Info   | 1  |  |
| IPC  | B22F00100  |  |
| Composition  |  | 1  |
| nr.  | 1  | Composite component -  |
| Composition  | [weight-%]: C + MN + NI + CU + MO : 0-12 * CR + 5<br>+ SN + BE + W + CO : REST   | S + SI + V + NB + AU + AL + P + FE +   |
| Keywords   | (english)  | (german)   |
|  | PRODUCTION   | HERSTELLUNG  |
|  | SINTERED-PRODUCT   | SINTERW  |
|  |  |  |
| 55   | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)   |
| Publication  | JP08209295 A   | 13.08.1996   |
| Labileation  |  | 15.00.1770   |
|  | JP15450  | 01.02.1995   |
| Priority   | JP15450<br>JP0102199507015450  |  |
| Priority<br>Application  |  |  |
| Priority<br>Application<br>Applicant                                   | JP0102199507015450   | 01.02.1995   |
| Priority Application Applicant Inventor                                | JP0102199507015450<br>NIPPON STEEL CORP.   | 01.02.1995<br>ESATO  |
| Priority Application Applicant Inventor Title                          | JP0102199507015450 NIPPON STEEL CORP. KOSEKI, TADASHI/ AIHARA, SHUJ/ MABUCHI, HIDI HIGH TENSILE STRENGTH STEEL PLATE FOR WELL  | 01.02.1995<br>ESATO  |
| Priority Application Applicant Inventor Title Info                     | JP0102199507015450 NIPPON STEEL CORP. KOSEKI, TADASHI/ AIHARA, SHUJI/ MABUCHI, HIDI HIGH TENSILE STRENGTH STEEL PLATE FOR WELL FATIGUE STRENGTH OF WELDED JOINT  | 01.02.1995<br>ESATO  |
| Priority Application Applicant Inventor Title Info IPC Composition     | JP0102199507015450 NIPPON STEEL CORP. KOSEKI, TADASHI/ AIHARA, SHUJI/ MABUCHI, HIDI HIGH TENSILE STRENGTH STEEL PLATE FOR WELI FATIGUE STRENGTH OF WELDED JOINT C+MN/6+(CU+NI)/15+(CR+MO+V)/5+NB/3-0,3-0,6 C22C03800   | 01.02.1995<br>ESATO  |
| Priority Application Applicant Inventor Title Info IPC Composition nr. | JP0102199507015450 NIPPON STEEL CORP.  KOSEKI, TADASHI/ AIHARA, SHUJI/ MABUCHI, HIDI HIGH TENSILE STRENGTH STEEL PLATE FOR WELI FATIGUE STRENGTH OF WELDED JOINT C+MN/6+(CU+NI)/15+(CR+MO+V)/5+NB/3:0,3-0,6  C22C03800 | 01.02.1995  ESATO  DING STRUCTURAL USE EXCELLENT 1  Composite component -  : 0-0.05 * S : 0-0.05 * CU : 0-2.5 * CR : 0 |

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|                    | CREEP-RESIST/STABILITY   | STANDFEST             |
|--------------------|--|-----------------------|
|                    | TENSILE-STRENGTH   | ZUGFEST               |
|                    | USE  | VERWENDUNG            |
|                    | WELDABLE   | SCHWEISSBAR           |
|                    |  |                       |
| 56                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication        | JP08209304 A   | 13.08.1996            |
| Priority           | JP16275  | 02.02.1995            |
| Application        | JP020219957-16275  |                       |
| Applicant          | NIPPON STEEL CORP.   |                       |
| Inventor           | OUCHI, HIROSHI/ KOBAYASHI, JUNICHI/ TOMITA   | A, YUKIO              |
| Title              | STEEL SHEET FOR AMINE-ENVIRONMENT GAS  | CLEANING DEVICE       |
| Info               |  |                       |
| IPC                | C22C03800  |                       |
| Composition nr.    | 1  | Composite component - |
| Composition        | [weight-%]: C: 0,05-0,35 * SI: 0,05-1 * MN: 0.2-1,<br>0,05-1,15 * MO: 0,01-0,6 * N: 0-0,006 * FE: REST<br>0,1 + B: 0-0.005 |                       |
| Keywords           | (english)  | (german)              |
|                    | TENSILE-STRENGTH   | ZUGFEST               |
|                    | USE  | VERWENDUNG            |
|                    |  |                       |
| 57                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication        | DE4444426 A  | 27.06.1996            |
| Priority           | DE4444426  | 14.12.1994            |
| Application        | DE14121994P4444426.5   |                       |
| Applicant          | GFT-GLEISTECHNIK GMBH  |                       |
| Inventor           | HELLER, WILHELM  |                       |
| Title              | RADREIFEN-STAHL  |                       |
| Info               |  |                       |
| IPC                | C22C03804  |                       |
| Composition<br>nr. | 1  | Composite component - |
| Composition        | [weight-%]: C:0-0,8 * SI:0,2-1,2 * MN:0,5-1,3 * 0-1,2 * MO:0-0,4 * NB:0-0,05 + V:0-0,1 * B:0-0<br>FE: REST                 |                       |
| Keywords           | (english)  | (german)              |
|                    | FATIGUE-RESISTING  | SCHWINGFEST           |
|                    | FRICTION-MATERIAL  | REIBW                 |
|                    |  | II .                  |

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| TENSILE-STRENGTH  | ZUGFEST   |
|---|---|
| THERMOSHOCK   | THERMOSCHOCK  |
| TOUGH   | ZÄH   |
| WEAR/TEAR   | VERSCHLEISS   |
|   |   |
| Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)  |
| EP714995 A  | 05.06.1996  |
| FR9414346   | 30.11.1994  |
| EP1011199595402512.8  |   |
| CREUSOT LOIRE INDUSTRIE   |   |
| BEGUINOT, JEAN/ BEAU, JEAN-LUC/ NECTOUX, I  | MARIE-LUCE  |
| PROCEDE D'ELABORATION D'UN ACIER AU TITA  | ANE ET ACIER OBTENU   |
| N X TI MAX. 0,0016  |   |
| C22C03814   |   |
|   |   |
| 1   | Composite component -   |
| N:0-0,02 * FE: REST   |   |
| (english)   | (german)  |
| MASTER-ALLOY  | VORLEG  |
|   | AUSSCHEIDUNGSH  |
|   | HERSTELLUNG   |
| USE   | VERWENDUNG  |
|   |   |
| Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)  |
| JP07278729 A  | 24.10.1995  |
| JP6066293   | 04.04.1994  |
|   |   |
| JP0404199406066293  |   |
| JP0404199406066293<br>NIPPON STEEL CORP.  |   |
|   |   |
| NIPPON STEEL CORP.  | YIELD RATIO   |
| NIPPON STEEL CORP. HAMADA, KAZUSHI/ TOMITA, YUKIO   | Y YIELD RATIO   |
| NIPPON STEEL CORP. HAMADA, KAZUSHI/ TOMITA, YUKIO   | Y YIELD RATIO   |
| NIPPON STEEL CORP.  HAMADA, KAZUSHI/TOMITA, YUKIO  HIIGH TENSILE STRENGTHI STEEL PLATE LOW IN | YIELD RATIO  Composite component -  |
| NIPPON STEEL CORP.  HAMADA, KAZUSHI/TOMITA, YUKIO  HIIGH TENSILE STRENGTHI STEEL PLATE LOW IN | Composite component -  5 * P : 0-0,049 * \$ : 0-0,029 * B.N : 0-2 * CU :  + NB : 0,005-0,08 + V : 0,01-0.5 + TI : 0,005-0,08 + V : 0,005-0,0 |
|   | THERMOSHOCK TOUGH  WEAR/TEAR  Deutsches Patent- und Markenamt DPMA  EP714995 A  EP0414346  EP1011199595402512.8  CREUSOT LOIRE INDUSTRIE  BEGUINOT, JEAN/ BEAU, JEAN-LUC/ NECTOUX.  PROCEDE DELABORATION DUN ACIER AU TITA  N X TI MAX. 0,0016  C22C03814  I  Iweight-%1: C: 0,04-0.8 * SI: 0-2 * MN: 0-3 * NI: 0-1 * NB: 0-0.5 * W: 0-3 * S: 0-0,2 * P: 0-0,03 * C. N: 0-0,02 * FE: REST  [english]  MASTER-ALLOY  PRECIPITATION-HARDENING  PRODUCTION  USE  Deutsches Patent- und Markenamt DPMA  IP07278729 A  |

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|                    | DISPERSION-HARDENING   | DISPERSIONSH                                   |
|--------------------|--|--|
|                    | PRODUCTION   | HERSTELLUNG                                    |
|                    | TENSILE-STRENGTH   | ZUGFEST  |
|                    | USE  | VERWENDUNG                                     |
|                    |  |  |
| 60                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                               |
| Publication        | EP640692 A   | 01.03.1995                                     |
| Priority           | US114439   | 30.08.1993                                     |
| Application        | EP2608199494113413.2   |  |
| Applicant          | SPS TECHNOLOGIES INC.  |  |
| Inventor           | MANNING, NEIL/ ANDERSON, RICHARD   |  |
| Title              | MAGNETIC STRIPS AND METHODS FOR MAKING   | G THE SAME                                     |
| Info               |  |  |
| IPC                | C21D00812  |  |
| Composition<br>nr. | 1  | Composite component -                          |
| Composition        | [weight-%]: C : (0)-1.2 * CR : 0-15 * MO : 0-4 * V : 0-0,025 * N : 0-0,025 * NI : 0-0,3 * O : 0-0,015 * S : 0-CO : 0-20 * TI : 0-2 * NB : 0-5 * FE : REST  |  |
| Keywords           | (english)  | (german)                                       |
|                    | CASE-HARDENING   | EINSATZH                                       |
|                    | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                                |
|                    | MAGNETIZABLE   | MAGNETISIERBAR                                 |
|                    | PRODUCTION   | HERSTELLUNG                                    |
|                    | USE  | VERWENDUNG                                     |
|                    |  |  |
| 61                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                               |
| Publication        | EP589415 A   | 30.03.1994                                     |
| Priority           | JP251239   | 21.09.1992                                     |
| Application        | EP2109199393115192.2   |  |
| Applicant          | KAWASAKI STEEL CORP.   |  |
| Inventor           | SATOH, SUSUMU/ OKADA, SUSUMU/ HIRATA, K  | OUICHI UND MITERFINDER                         |
| Title              | STEEL SHEET FOR PRESS WORKING THAT EXHI<br>SATISFACTORY PRESS WORKABILITY  | BITS EXCELLENT STIFFNESS AND                   |
| Info               |  |  |
| IPC                | C21D00948  |  |
| Composition<br>nr. | I  | Composite component -                          |
| Composition        | weight-%]: C : 0-1 * SI : 0-2 * MN : 0-3 * P : 0-0,3 * 0.01-2 + V : 0.002-0,2 * TI : 0.002-0,2 + NB : 0.002-0,2 + NB : 0.002-0,2 + NB : 0.001-0,1 + SE : 0.001-0,1 + CA : 0.001-0,1 + AL : 0.001-0,2 | 2 + CU : 0,01-2 + ZR : 0.002-0,2 + SB : 0.001- |

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| Keywords   | (english)  | (german)   |
|--|--|--|
|  | PLASTIC  | PLASTISCH  |
|  | USE  | VERWENDUNG   |
|  |  |  |
| 62   | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)   |
| Publication  | JP05263183 A   | 12.10.1993   |
| Priority   | JP93608  | 19.03.1992   |
| Application  | JP190319924-93608  |  |
| Applicant  | SUMITOMO METAL IND LTD.  |  |
| Inventor   | UNO, MITSUO  |  |
| Title  | CARBURIZING CASE HARDENING STEEL EXCEL<br>RESISTANCE   | LENT IN DELAYED FRACTURE   |
| Info   | C/S+SI/50+MN/150+3.P+2.S+CR/10-NB/10 MAX. 0,2<br>HARDENING STEEL STABLY SHOWING EXCELL   |  |
| IPC  | C22C03800  |  |
| Composition nr.  | 1  | Composite component -  |
| Composition  | [weight-%]: C:0,1-0,3 * SI:0-0,8 * MN:0-1,5 * P<br>0.1 * NI:0-3,5 * MO:0-1.5 * CU:0-1 * AL:0-0,1 *<br>* CA:0-0,01 * FE: REST   |  |
|  |  |  |
| Keywords   | (english)  | (german)   |
| Keywords   | (english) CASE-HARDENING   | (german) EINSATZH  |
| Keywords   |  |  |
| Keywords<br>63   |  |  |
|  | CASE-HARDENING   | EINSATZH   |
| 63   | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA   | EINSATZH  1.2.2009 (2:19h)   |
| 63<br>Publication  | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA  EP559225 A   | EINSATZH  1.2.2009 (2:19h)  08.09.1993   |
| 63<br>Publication<br>Priority  | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA  EP559225 A  RP49825  | EINSATZH  1.2.2009 (2:19h)  08.09.1993   |
| 63 Publication Priority Application  | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA  EP559225 A  P49825  EP0503199393103601.6   | EINSATZH  1.2.2009 (2:19h)  08.09.1993  06.03.1992   |
| 63 Publication Priority Application Applicant Inventor   | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA  EP559225 A  P49825  EP0503199393103601.6  KAWASAKI STEEL CORP.   | EINSATZH  [1.2.2009 (2:19h)  [08.09.1993]  [06.03.1992]  SUMU UND MITERFINDER  |
| 63 Publication Priority Application Applicant Inventor Title                                   | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA EP559225 A JP49825 EP0503199393103601.6  KAWASAKI STEEL CORP. OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS HIGH TENSILE STEEL SHEET EXCELLENT STRET  | EINSATZH  [1.2.2009 (2:19h)  [08.09.1993]  [06.03.1992]  SUMU UND MITERFINDER  |
| 63 Publication Priority Application Applicant Inventor Title                                   | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA EP559225 A JP49825 EP0503199393103601.6  KAWASAKI STEEL CORP. OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS HIGH TENSILE STEEL SHEET EXCELLENT STRET  | EINSATZH  [1.2.2009 (2:19h)  [08.09.1993]  [06.03.1992]  SUMU UND MITERFINDER  |
| 63 Publication Priority Application Applicant  | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA EP559225 A [P49825 EP0503199393103601.6 KAWASAKI STEEL CORP. OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS HIGH TENSILE STEEL SHEET EXCELLENT STREI PRODUCING THE SAME  | EINSATZH  [1.2.2009 (2:19h)  [08.09.1993]  [06.03.1992]  SUMU UND MITERFINDER  |
| Publication Priority Application Applicant Inventor Title Info IPC Composition nr.             | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA EP559225 A [P49825 EP0503199393103601.6 KAWASAKI STEEL CORP. OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS HIGH TENSILE STEEL SHEET EXCELLENT STREI PRODUCING THE SAME  | EINSATZH    1.2.2009 (2:19h)     08.09.1993     06.03.1992     SUMU UND MITERFINDER     ICH FORMABILITY, AND METHOD OF     Composite component -     2:0-0.25 * S : 0-0.1 * N : 0-0.005 * TI : 0.002-  |
| 63 Publication Priority Application Applicant Inventor Title Info IPC Composition              | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA EP559225 A  JP49825 EP0503199393103601.6  KAWASAKI STEEL CORP.  OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS HIGH TENSILE STEEL SHEET EXCELLENT STREI PRODUCING THE SAME  C21D00804  I lweight-%]: C: 0.004-0.2 * SI: 0-2 * MN: 0-3.5 * P  | EINSATZH    1.2.2009 (2:19h)     08.09.1993     06.03.1992     SUMU UND MITERFINDER     ICH FORMABILITY, AND METHOD OF     Composite component -     2:0-0.25 * S : 0-0.1 * N : 0-0.005 * TI : 0.002-  |
| Publication Priority Application Applicant Inventor Title Info IPC Composition nr. Composition | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA EP559225 A IP49825 EP0503199393103601.6 KAWASAKI STEEL CORP. OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS HIGH TENSILE STEEL SHEET EXCELLENT STREI PRODUCING THE SAME  C21D00804  I lweight-%]: C: 0,004-0,2 * SI: 0-2 * MN: 0-3.5 * P 0,2 + NB: 0,002-0,2 * FE: REST * MO: 0-5 + CR                     | EINSATZH    1.2.2009 (2:19h)     08.09.1993     06.03.1992     SUMU UND MITERFINDER     ICH FORMABILITY, AND METHOD OF     Composite component -     2:0-0.25 * S : 0-0,1 * N : 0-0,005 * TI : 0,002-1,005 * NI : 0-5 + CU : 0-5 + B : 0-0,1             |
| Publication Priority Application Applicant Inventor Title Info IPC Composition nr. Composition | CASE-HARDENING  Deutsches Patent- und Markenamt DPMA  EP559225 A  IP49825  EP0503199393103601.6  KAWASAKI STEEL CORP.  OKADA, SUSUMU/ HIRATA, KOUICHI/ SATO, SUS  HIGH TENSILE STEEL SHEET EXCELLENT STREI  PRODUCING THE SAME  C21D00804  1  lweight-%]: C: 0,004-0,2 * SI: 0-2 * MN: 0-3,5 * P  0.2 + NB: 0,002-0,2 * FE: REST * MO: 0-5 + CR  (english) | EINSATZH    1.2.2009 (2:19h)     08.09.1993     06.03.1992     SUMU UND MITERFINDER     ICH FORMABILITY, AND METHOD OF     Composite component -     2:0-0.25 * S : 0-0,1 * N : 0-0,005 * T1 : 0,002-1:0-5 + N1: 0-5 + CU : 0-5 + B : 0-0,1     (german) |

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|                           | HEAT-TREATMENT  | WÄRMEBEHANDLUNG            |
|---------------------------|---|----------------------------|
|                           | MARTENSITE  | MARTENSIT                  |
|                           | PERLITE   | PERLIT                     |
|                           | PLASTIC   | PLASTISCH                  |
|                           | PRODUCTION  | HERSTELLUNG                |
|                           | TENSILE-STRENGTH  | ZUGFEST                    |
|                           |   |                            |
| 64                        | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)           |
| Publication               | JP02153020 A  | 12.06.1990                 |
| Priority                  | JP306912  | 06.12.1988                 |
| Application               | JP0612198863-306912   |                            |
| Applicant                 | KAWASAKI STEEL CORP   |                            |
| Inventor                  | UCHIDA, KIYOSHI   |                            |
| Title                     | PRODUCTION OF LOW-YIELD RATIO HIGH TENS   | SILE STEEL                 |
| Info                      |   |                            |
| IPC                       | C21D00802   |                            |
| Composition               | 1   | Composite component -      |
| nr.                       | 1   |                            |
| Composition               | [weight-%]: C:0,05-0,25 * SI:0,05-1 * MN:0,6-2<br>CR:0-1 + MO:0-0,5 + V:0-0,1 + NB:0-0,08 * F |                            |
| Keywords                  | (english)   | (german)                   |
|                           | FERRITE   | FERRIT                     |
|                           | HARD  | HART                       |
|                           | HEAT-TREATMENT  | WÄRMEBEHANDLUNG            |
|                           | PRECIPITATION-HARDENING   | AUSSCHEIDUNGSH             |
|                           | PRODUCTION  | HERSTELLUNG                |
|                           | TENSILE-STRENGTH  | ZUGFEST                    |
|                           | TOUGH   | ZÄH                        |
|                           |   |                            |
| 65                        | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)           |
| Publication               | EP366646 A  | 02.05.1990                 |
| Priority                  | AT2666  | 28.10.1988                 |
| Application               | EP2310198989890278.8  |                            |
| Applicant                 | VOEST-ALPINE STAHL LINZ GMBH  |                            |
| т ,                       | ENOECKL, HANS/ SCHIMBOECK, ROLAND/ VEIT   | L, GISWALT UND MITERFINDER |
| Inventor                  |   |                            |
| Title                     | VERFAHREN ZUM HERSTELLEN EINES PLATTIE  | RTEN FORMKOERPERS          |
| Inventor<br>Title<br>Info | VERFAHREN ZUM HERSTELLEN EINES PLATTIE  | RTEN FORMKOERPERS          |
| Title                     | VERFAHREN ZUM HERSTELLEN EINES PLATTIE  C21D00600   | RTEN FORMKOERPERS          |

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| a  | Component a [weight-%]: C: 0-0,25 * SI: 0,1-1,5 *   |  |
|--|---|--|
| Composition  | 0,5 * NI : 0-3 * NB : 0-0,05 * V : 0-0,1 * N : 0-0,02 * Component b [weight-%]: C : 0,001-0,I * SI : 0,001  |  |
|  | MO : 7-30 * CU : 0-5 * TI : 0-1 * NB : 0-1 * P : 0-0  |  |
| Keywords   | (english)   | (german)   |
|  | CLADDING-MATERIAL   | PLATTIERW  |
|  | COMPOSITE-MATERIAL  | VERBUNDW   |
|  | CORROSION-RESISTING   | KORROSIONSBEST   |
|  | HEAT-TREATMENT  | WÄRMEBEHANDLUNG  |
|  | PRODUCTION  | HERSTELLUNG  |
|  | SURFACE   | OBERFLÄCHE   |
|  | USE   | VERWENDUNG   |
|  |   |  |
| 66   | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)   |
| Publication  | JP01279709 A  | 10.11.1989   |
| Priority   | JP111268  | 06.05.1988   |
| Application  | JP0605198863-111268   |  |
| Applicant  | KOBE STEEL LTD.   |  |
|  | TAKIZAWA, KENSABURO   |  |
| Inventor   | TAKIZAWA, KENSABURO   |  |
|  | TAKIZAWA, KENSABURO PRODUCTION OF PRE-HARDENED STEEL FOR F  | PLASTIC DIE BY DIRECTLY QUENCHING  |
| Title  |   | PLASTIC DIE BY DIRECTLY QUENCHING  |
| Title<br>Info  |   | PLASTIC DIE BY DIRECTLY QUENCHING  |
| Inventor Title Info IPC Composition  | PRODUCTION OF PRE-HARDENED STEEL FOR I  |  |
| Title<br>Info  | PRODUCTION OF PRE-HARDENED STEEL FOR I  | PLASTIC DIE BY DIRECTLY QUENCHING  Composite component -   |
| Title Info IPC Composition nr.   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  1  [weight-%]: C : 0,1-0,25 * SI : 0.05-0,8 * MN : 0,5-  | Composite component - 2 * P : 0-0,03 * \$ : 0-0,07 * N : 0-0,0029 * AL : (   |
| Title Info IPC Composition nr.   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C: 0,1-0,25 * SI: 0,05-0,8 * MN: 0,5- 0,0039 * O: 0-0,0039 * CR: 0,5-2,5 * MO: 0,05-1   | Composite component -<br>2 * P : 0-0.03 * \$ : 0-0.07 * N : 0-0.0029 * AL : (<br>* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 *   |
| Title Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0,1-0,25 * SI : 0.05-0,8 * MN : 0,5- 0,0039 * O : 0-0,0039 * CR : 0,5-2,5 * MO : 0,05-1  BB : 0-0,3 * CU : 0-0,3 * NI : 0-2 * TI : 0-0,1 * B : 0-0  | Composite component -  2 *P: 0-0.03 * S: 0-0.07 *N: 0-0.0029 * AL: (  * NB: 0.0005-0.05 * ZR: 0-0.15 * CA: 0-0.05 *  1.003 * FE: REST  |
| Title Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL, FOR I  C21D00802  I  [weight-%]: C : 0,1-0,25 * SI : 0.05-0,8 * MN : 0,5- 0,0039 * O : 0-0,0039 * CR : 0,5-2,5 * MO : 0,05-1 PB : 0-0,3 * CU : 0-0,3 * NI : 0-2 * TI : 0-0,1 * B : 0-0  (english)   | Composite component - 2 * P: 0-0.03 * S: 0-0.07 * N: 0-0.0029 * AL: ( * NB: 0.005-0.05 * ZR: 0-0.15 * CA: 0-0.05 * ( 0.003 * FE: REST ( (german)   |
| Title Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0,1-0,25 * SI : 0,05-0,8 * MN : 0,5- 0,0039 * O : 0-0,0039 * CR : 0,5-2,5 * MO : 0,05-1 PB : 0-0,3 * CU : 0-0,3 * NI : 0-2 * TI : 0-0,1 * B : 0-0  (english)  HARD  | Composite component -  2 *P: 0-0.03 * S: 0-0.07 *N: 0-0.0029 *AL: (  *NB: 0.005-0.05 *ZR: 0-0.15 * CA: 0-0.05 *  .003 * FE: REST  (german)  HART   |
| Title Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C: 0.1-0.25 * SI: 0.05-0.8 * MN: 0.5- 0.0039 * O: 0-0.0039 * CR: 0.5-2.5 * MO: 0.05-1 PB: 0-0.3 * CU: 0-0.3 * NI: 0-2 * TI: 0-0.1 * B: 0-0  [english]  HEAT-TREATMENT   | Composite component -<br>  2 * P : 0-0.03 * S : 0-0.07 * N : 0-0.0029 * AL : (<br>* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (<br>  0.003 * FE : REST (<br>  (german)   |
| Title Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802    weight-% : C: 0,1-0,25 * SI: 0,05-0,8 * MN: 0,5-0,0030 * O: 0-0,0039 * CR: 0,5-2,5 * MO: 0,05-1  PB: 0-0,3 * CU: 0-0,3 * NI: 0-2 * TI: 0-0,1 * B: 0-0  (english)  HARD  HEAT-TREATMENT  TOOL   | Composite component -<br>2 * P : 0-0.03 * \$ : 0-0.07 * N : 0-0.0029 * AL : (<br>* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (<br>0.003 * FE : REST (german) |
| Title Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0,1-0,25 * SI : 0,05-0,8 * MN : 0,5- 0,0039 * O : 0-0,0039 * CR : 0,5-2,5 * MO : 0,05-1  PB : 0-0,3 * CU : 0-0,3 * NI : 0-2 * TI : 0-0,1 * B : 0-0  (english)  HARD  HEAT-TREATMENT  TOOL  TOUGH  | Composite component -   2 * P : 0-0.03 * \$ : 0-0.07 * N : 0-0.029 * AL : (  |
| Fitle Info IPC Composition nr. Composition                                   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802    weight-% : C: 0,1-0,25 * SI: 0,05-0,8 * MN: 0,5-0,0030 * O: 0-0,0039 * CR: 0,5-2,5 * MO: 0,05-1  PB: 0-0,3 * CU: 0-0,3 * NI: 0-2 * TI: 0-0,1 * B: 0-0  (english)  HARD  HEAT-TREATMENT  TOOL   | Composite component -<br>2 * P : 0-0.03 * \$ : 0-0.07 * N : 0-0.0029 * AL : (<br>* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (<br>0.003 * FE : REST (german) |
| Title Info IPC Composition nr. Composition Keywords                          | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0.1-0.25 * SI : 0.05-0.8 * MN : 0,5- 0.0039 * O : 0-0.0039 * CR : 0,5-2.5 * MO : 0,05-1  PB : 0-0.3 * CU : 0-0,3 * NI : 0-2 * TI : 0-0,1 * B : 0-0  (english)  HARD  HEAT-TREATMENT  TOOL  TOOL  TOUGH  USE   | Composite component -   2 * P : 0-0.03 * S : 0-0.07 * N : 0-0.0029 * AL : (   * NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (   2 man  |
| Title Info IPC Composition nr. Composition Keywords                          | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0.1-0.25 * SI : 0.05-0.8 * MN : 0.5- 0.0039 * O : 0-0.0039 * CR : 0.5-2.5 * MO : 0.05-1 PB : 0-0.3 * CU : 0-0.3 * NI : 0-2 * TI : 0-0.1 * B : 0-0  (english)  HEAT-TREATMENT  TOOL  TOUGH  USE  Deutsches Patent- und Markenamt DPMA                        | Composite component -  2 * P:0-0.03 * S:0-0.07 * N:0-0.0029 * AL:( * NB:0.005-0.05 * ZR:0-0.15 * CA:0-0.05 *)  .003 * FE:REST  (german)  HART  WÄRMEBEHANDLUNG  WERKZEUG  ZÄH  VERWENDUNG  I.2.2009 (2:19h)  |
| Title Info IPC Composition nr. Composition Keywords                          | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C: 0.1-0.25 * SI: 0.05-0.8 * MN: 0.5- 0.0039 * O: 0-0.0039 * CR: 0.5-2,5 * MO: 0.05-1 PB: 0-0.3 * CU: 0-0.3 * NI: 0-2 * TI: 0-0.1 * B: 0-0  [english]  HEAT-TREATMENT  TOOL  TOUGH  USE  Deutsches Patent- und Markenamt DPMA  JP63195252 A                     | Composite component -  2 * P : (0-0.03 * S : 0-0.07 * N : 0-0.0029 * AL : (* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (* german)  HART  WÄRMEBEHANDLUNG  WERKZEUG  ZÄH  VERWENDUNG  1.2.2009 (2:19h)  12.08.1988  |
| Title Info IPC Composition nr. Composition Keywords  67 Publication Priority | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0.1-0.25 * SI : 0.05-0.8 * MN : 0.5- 0.0039 * O : 0-0.0039 * CR : 0.5-2.5 * MO : 0.05-1 PB : 0-0.3 * CU : 0-0.3 * NI : 0-2 * TI : 0-0.1 * B : 0-0  (english)  HEAT-TREATMENT  TOOL  TOUGH  USE  Deutsches Patent- und Markenamt DPMA                        | Composite component -  2 * P:0-0.03 * S:0-0.07 * N:0-0.0029 * AL:( * NB:0.005-0.05 * ZR:0-0.15 * CA:0-0.05 *)  .003 * FE:REST  (german)  HART  WÄRMEBEHANDLUNG  WERKZEUG  ZÄH  VERWENDUNG  I.2.2009 (2:19h)  |
| Title Info IPC Composition nr. Composition Keywords  67 Publication Priority | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C: 0.1-0.25 * SI: 0.05-0.8 * MN: 0.5- 0.0039 * O: 0-0.0039 * CR: 0.5-2,5 * MO: 0.05-1 PB: 0-0.3 * CU: 0-0.3 * NI: 0-2 * TI: 0-0.1 * B: 0-0  [english]  HEAT-TREATMENT  TOOL  TOUGH  USE  Deutsches Patent- und Markenamt DPMA  JP63195252 A                     | Composite component -  2 * P : (0-0.03 * S : 0-0.07 * N : 0-0.0029 * AL : (* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (* german)  HART  WÄRMEBEHANDLUNG  WERKZEUG  ZÄH  VERWENDUNG  1.2.2009 (2:19h)  12.08.1988  |
| Title Info IPC Composition nr.   | PRODUCTION OF PRE-HARDENED STEEL FOR I  C21D00802  I  [weight-%]: C : 0,1-0,25 * SI : 0,05-0,8 * MN : 0,5- 0,0039 * O : 0-0,0039 * CR : 0,5-2,5 * MO : 0,05-1 PB : 0-0,3 * CU : 0-0,3 * NI : 0-2 * TI : 0-0,1 * B : 0-0  [english]  HEAT-TREATMENT  TOOL  TOUGH  USE  Deutsches Patent- und Markenamt DPMA  IP63195252 A  IP25566 | Composite component -  2 * P : (0-0.03 * S : 0-0.07 * N : 0-0.0029 * AL : (* NB : 0.005-0.05 * ZR : 0-0.15 * CA : 0-0.05 * (* german)  HART  WÄRMEBEHANDLUNG  WERKZEUG  ZÄH  VERWENDUNG  1.2.2009 (2:19h)  12.08.1988  |

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| Title   | STEEL STOCK FOR EMBRITTLEMENT SIMULATION   |  |
|---|--|--|
| Info  | TO OBTAIN A STEEL STOCK FOR EMBRITTLEMENT SIMULATION HAVING REQUIRED EMBRITTLEMENT CHARACTERISTIC AND SUITED TO THE SAFETY EVALUATION TEST OF PLANTS, BY SPECIFYING IN ONE CASE, RESPECTIVE CONTENTS OF SIX KINDS OF COMPONENT ELEMENTS SUCH AS C. SI, MN, ETC., ALSO SPECIFYING THE TOTAL CONTENT OF ONE OR MORE ELEMENTS AMONG AS, SN, AND SI, NA ANOTHER CASE, FURTHER MORE CONTENTS AMONG AS, NI, AND SIA, NA ANOTHER CASE, FURTHER MORE CONTENTS, AS ABOVE MENTIONED, OF ONE OR MORE COMPONENTS AMONG SIX KINDS OF ELEMENTS SUCH AS NI, CR, ETC., AND LIMITING IN BOTH CASE SPECIFIC EMBRITTLEMENT PARAMETER VALUES |  |
| IPC   | C22C03860  |  |
| Composition nr.                                     | 1  | Composite component -  |
| Composition   | [weight-%]: C : 0-0,3 * SI : 0-1 * MN : 0-2 * P: 0-0,1 * S : 0-0,06 * AS : 0-0,1 + SN : 0-0,1 + SB : 0-0,08 * CR : 0-3,5 + NI : 0-1 + MO : 0-1,5 + V : 0-0,5 + NB : 0-0,1 + CU : 0-1 * FE : REST   |  |
| Keywords  | (english)  | (german)   |
|   | USE  | VERWENDUNG   |
|   |  |  |
| 68  | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)   |
| Publication   | WO8803573 A  | 19.05.1988   |
| Priority  | US927014   | 05.11.1986   |
| Application   | WO19101987US87/02681   |  |
| Applicant   | MARTIN MARIETTA CORP.  |  |
| inpuneant   |  |  |
| Inventor  | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI<br>MITERFINDER  | ISTODOULOU, LEONTIOS UND   |
| Inventor  | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI   | <u> </u>   |
| Inventor<br>Title                                   | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI<br>MITERFINDER<br>ISOTHERMAL PROCESS FOR FORMING POROUS   | <u> </u>   |
|   | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI<br>MITERFINDER<br>ISOTHERMAL PROCESS FOR FORMING POROUS   |  |
| Inventor Title Info                                 | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI<br>MITERFINDER<br>ISOTHERMAL PROCESS FOR FORMING POROUS<br>POROUS PRODUCT THEREOF<br>C22C00105  |  |
| Inventor Title Info IPC Composition nr.             | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI<br>MITERFINDER<br>ISOTHERMAL PROCESS FOR FORMING POROUS<br>POROUS PRODUCT THEREOF<br>C22C00105  | METAL-SECOND PHASE COMPOSITES AND    Composite component b     NLAGERUNG: 70-90     R + MN + CO + FE + SI + MO + BE + AG + 1 + TA + HF + ZR: 100     C + TLC + TLN + AL + TI + SI + B + C + S + 1 + HF + MG + SC + LA + CR + O + N + LI + BE   |
| Inventor Title Info IPC Composition nr. Composition | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRIMTERERINDER ISOTHERMAL PROCESS FOR FORMING POROUS POROUS PRODUCT THEREOF  C22C00105  Composite material (volume-%): MATRIX: 10-30 * El Component a [weight-%]: AL + NI + TI + CU + V + C AU + W + SB + BI + FI + MG + PB + ZN + SN + NB Component b [weight-%]: TLB + ZR, BI + ZR, SI + ZR, CI + TI + Y + CO + NI + MO + W + V + ZR + NB   | METAL-SECOND PHASE COMPOSITES AND    Composite component b     NLAGERUNG: 70-90     R + MN + CO + FE + SI + MO + BE + AG + 1 + TA + HF + ZR: 100     - TLC + TLN + AL + TI + SI + B + C + S + 1 + HF + MG + SC + LA + CR + O + N + LI + BE   |
| Inventor Title Info IPC Composition nr. Composition | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI MITERFINDER ISOTHERMAL PROCESS FOR FORMING POROUS POROUS PRODUCT THEREOF  C22C00105  1  Composite material [volume-%]: MATRIX: 10-30 * El Component a [weighi-%]: AL + NI + TI + CU + V + C AU + W + SB + BI + PI + MG + PB + ZN + SN + NB Component b [weighi-%]: TI.B + ZR.B + ZR.SI + ZR.C TA + TIH + Y + CO + NI + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SE  | METAL-SECOND PHASE COMPOSITES AND  Composite component b  NLAGERUNG: 70-90 R + MN + CO + FE + SI + MO + BE + AG + 1 + TA + HF + ZR : 100 2 + TI.C + TI.N + AL + TI + SI + B + C + S + 1 + HF + MG + SC + LA + CR + O + N + LI + BE LIERD : 100   |
| Title Info IPC Composition nr. Composition          | MOSHIER, WILLIAM/ BRUPBACHER, IOHN/ CHRI MITEREINDER ISOTHERMAL PROCESS FOR FORMING POROUS POROUS PRODUCT THEREOF  C22C00105  1  Composite material [volume-%]: MATRIX: 10-30 *EI Component a [weighi-%]: AL + NI + TI + CU + V + C AU + W + SB + BI + PT + MG + PB + ZN + SN + NB Component b [weighi-%]: TLB + ZRB + ZR SI + ZRC TA + TIH + Y + CO + NI + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SEI [english]   | METAL-SECOND PHASE COMPOSITES AND  Composite component b  NLAGERUNG: 70-90  R + MN + CO + FE + SI + MO + BE + AG + + TA + HF + ZR : 100  + TLC + TLN + AL + TL + SI + B + C + S + + HF + MG + SC + LA + CR + O + N + L1 + BE LTERD: 100  [german]  VERBUNDW  DISPERSIONSH  |
| Inventor Title Info IPC Composition nr. Composition | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRIMTHERINDER ISOTHERMAL PROCESS FOR FORMING POROUS PRODUCT THEREOF  C22C00105  1  Composite material [volume-%]: MATRIX: 10-30 * EL Component a [weight-%]: AL + NI + TI + CU + V + C AL + W + SB + Bl + PT + MG + FB + ZN + SN + NB Component b [weight-%]: TLB + ZR.B + ZR.SI + ZR.C TA + TI + Y + CO + NI + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SEI (english)  COMPOSITE-MATERIAL  | Composite component b  NLAGERUNG: 70-90 R + MN + CO+ FE + SI + MO + BE + AG + 1 + TA + HF + ZR: 100 C+ TLC + TLN + AL + TI + SI + B + C + S + HF + MG + SC + LA + CR + O + N + L1 + BE LTERD: 100 [(german)]   |
| Inventor Title Info IPC Composition nr. Composition | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI MITERFINDER ISOTHERMAL PROCESS FOR FORMING POROUS PROOUS PRODUCT THEREOF  C22C00105  I  Composite material [volume-%]: MATRIX: 10-30 * Ef Component a [weight-%]: AL + N1 + T1 + CU + V + C AU + W + SB + Bl + PT + MG + PB + ZN + SN + NB Component b [weight-%]: T1.B + ZR, B + ZR, S1 + ZR, C TA + T1 + Y + CO + N1 + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SEI (english)  COMPOSITE-MATERIAL DISPERSION-HARDENING  | Composite component b  NLAGERUNG: 70-90 R + MN + CO+ FE + SI + MO + BE + AG + TA + HF + ZR: 100 - + TLC + TLN + AL + TI + SI + B + C + S + HF + MG + SC + LA + CR + O + N + LI + BE TERB: 1:00 [seerman] VERBUNDW [DISPERSIONSH] [FEINKÖRNIG] WÄRMEBEHANDLUNG  |
| Inventor Title Info IPC Composition nr. Composition | MOSHIER, WILLIAM/ BRUPBACHER, IOHN/ CHRI MITERFINDER ISOTHERMAL PROCESS FOR FORMING POROUS POROUS PRODUCT THEREOF  C22C00105  1  Composite material [volume-%]: MATRIX: 10-30 * EI Component a [weight-%]: AL + NI + TI + CU + V + C Component b [weight-%]: AL + NI + TI + CU + V + C AU + W + SB + BI + PT + MG + TB + ZN + SN + NB Component b [weight-%]: TLB + ZR.B + ZR.SI + ZR.C TA + TI + Y + CO + NI + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SEI [english] COMPOSITE-MATERIAL DISPERSION-HARDENING FINE-GRAINED HEAT-TREATMENT HIGH-TEMPER-STRENGTH                                    | Composite component b  NLAGERUNG: 70-90 R + MN + CO+ FE + SI + MO + BE + AG + 1A + 1A + 1B + 1A + 1A |
| Inventor Title Info IPC Composition                 | MOSHIER, WILLIAM/ BRUPBACHER, JOHN/ CHRI MITERENDER  ISOTHERMAL PROCESS FOR FORMING POROUS POROUS PRODUCT THEREOF  C22C00105  1  Composite material [volume-%]: MATRIX: 10-30 * E1 Component a [weight-%]: AL + N1 + T1 + CU + V + C Component b [weight-%]: AL + N1 + T1 + CU + V + C AU + W + SB + B1 + PT + MG + PB + ZN + SN + NB Component b [weight-%]: T1B + ZR B + ZR S1 + ZR. TA + TT1 + Y + CO + N1 + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SEI (english)  COMPOSITE-MATERIAL DISPERSION-HARDENING FINE-GRAINED HEAT-TREATMENT HIGH-TEMPER-STRENGTH POROUS                            | Composite component b  NLAGERUNG: 70-90 R + MN + CO+ FE + SI + MO + BE + AG + TA + HF + ZR : 100 + TLC + TLN + AL + TI + SI + B + C + S + HF + MG + SC + LA + CR + O + N + LI + BE LERD: 100 (german)  VERBUNDW  DISPERSIONSII FEINKÖRNIG  WÄRMEBEHANDLUNG  WARMEEST  PORÖS  |
| Inventor Title Info IPC Composition nr. Composition | MOSHIER, WILLIAM/ BRUPBACHER, IOHN/ CHRI MITERFINDER ISOTHERMAL PROCESS FOR FORMING POROUS POROUS PRODUCT THEREOF  C22C00105  1  Composite material [volume-%]: MATRIX: 10-30 * EI Component a [weight-%]: AL + NI + TI + CU + V + C Component b [weight-%]: AL + NI + TI + CU + V + C AU + W + SB + BI + PT + MG + TB + ZN + SN + NB Component b [weight-%]: TLB + ZR.B + ZR.SI + ZR.C TA + TI + Y + CO + NI + MO + W + V + ZR + NB + FE + MN + ZN + SN + CU + AG + AU + PT + SEI [english] COMPOSITE-MATERIAL DISPERSION-HARDENING FINE-GRAINED HEAT-TREATMENT HIGH-TEMPER-STRENGTH                                    | Composite component b  NLAGERUNG: 70-90 R + MN + CO+ FE + SI + MO + BE + AG + 1A + 1A + 1B + 1A + 1A |

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| 69                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)         |
|--------------------|---|--------------------------|
| Publication        | WO8803574 A   | 19.05.1988               |
| Priority           | US927031  | 05.11.1986               |
| Application        | WO19101987US87/02680  |                          |
| Applicant          | MARTIN MARIETTA CORP.   |                          |
| Inventor           | NAGLE, DENNIS/ BRUPBACHER, JOHN/ CHRISTOD   | OULOU, LEONTIOS          |
| Title              | PROCESS FOR PRODUCING METAL-SECOND PHAS   | E COMPOSITES AND PRODUCT |
| Info               | INTERNATIONAL APPLICATION NUMBER: PCT/US  | 87/ 02680                |
| IPC                | C22C03200   |                          |
| Composition        |   |                          |
| nr.                | 1   | Composite component b    |
| Composition        | Composite material [\$\frac{4}{2}\): MATRIX * EINLAGERUNG Component a [weight-\$\frac{4}{2}\]: AL + NI + TI + CU + V + CR + MN + CO + FE + SI + MO + BE + AG + AU + PT + NB + TA + HF + ZR + MG + PB + ZN + SN + W + SB + BI : 100 Component b [weight-\$\frac{4}{2}\]: AL + TI + SI + B + C + S + TA + TH + Y + CO + NI + MO + W + V + ZR + NB + HF + MG + SC + LA + CR + O + N + LI + BE + FE + MN + ZN + SN + CU + AG + AU + FT + SSL TERD + TIB + ZR & + TIC + ZR & + ZR |                          |
| Keywords           | (english)   | (german)                 |
|                    | COMPOSITE-MATERIAL  | VERBUNDW                 |
|                    | DISPERSION-HARDENING  | DISPERSIONSH             |
|                    | FINE-GRAINED  | FEINKÖRNIG               |
|                    | HIGH-TEMPER-STRENGTH  | WARMFEST                 |
|                    | PRODUCTION  | HERSTELLUNG              |
|                    |   |                          |
| 70                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)         |
| Publication        | EP253497 A  | 20.01.1988               |
| Priority           | US873890  | 13.06.1986               |
| Application        | EP1106198787305181.7  |                          |
| Applicant          | MARTIN MARIETTA CORP.   |                          |
| Inventor           | NAGLE, DENNIS/ BRUPBACHER, JOHN/ CHRISTOD   | OULOU, LEONTIOS          |
| Title              | COMPOSITES HAVING AN INTERMETALLIC CONT   | AINING MATRIX            |
| Info               |   |                          |
| IPC                | C22C00110   |                          |
| Composition<br>nr. | 1   | Composite component b    |
| Composition        | Composite material [%]: MATRIX * EINLAGERUNG Component a [weight-%]: TI + TA + NB + NI + CO + CU + FE + PT + AU + AG + PB + ZN + MO + SELTERD + Y + SC + LA + HF + SN + W + LI + MG + BE + CR + V + ZR + MN + AL : 100 Component b [weight-%]: TI + B + SI + C + S + MO + W + V + AL + ZR + NB + CO + N + O + NI + FE + MG + BE + MN + ZN + LI + Y + SELTERD + HF + TA + CR : 100   |                          |
| Keywords           | (english)   | (german)                 |
|                    | COMPOSITE-MATERIAL  | VERBUNDW                 |

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|                 | DISPERSION-HARDENING   | DISPERSIONSH                          |
|-----------------|--|---------------------------------------|
|                 | PLASTIC  | PLASTISCH                             |
|                 | PRODUCTION   | HERSTELLUNG                           |
|                 |  |                                       |
| 71              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                      |
| Publication     | JP62260042 A   | 12.11.1987                            |
| Priority        | JP102879   | 02.05.1986                            |
| Application     | JP0205198661-102879  | 7.                                    |
| Applicant       | DAIDO STEEL CO., LTD.  |                                       |
| Inventor        | TAKADA, KATSUNORI  |                                       |
| Title           | HIGH STRENGTH UNREFINED TOUGH STEEL  |                                       |
| Info            | TO IMPROVE THE TOUGHNESS OF AN UNREFINED STEEL AS WELL AS THE STRENGTH BY SPECIFYING THE STRUCTURE OF THE STEEL AS WELL AS THE CHEMICAL COMPOSITION        |                                       |
| IPC             | C22C03826  |                                       |
| Composition nr. | 1  | Composite component -                 |
| Composition     | [weight-%]: C:0,1-0,3 * SI:0-1 * MN:0,5-1,5 * CR:0,5-3 * NB:0,01-0,1 * MO:0-0,7 + NI:0-2 + S:0-0,15 + PB:0-0,3 + CA:0-0,01 + BI:0-0,3 + TE:0-0,3 * FE:REST |                                       |
| Keywords        | (english)  | (german)                              |
|                 | MACHINEABLE  | ZERSPANBAR                            |
|                 | PRODUCTION   | HERSTELLUNG                           |
|                 | TENSILE-STRENGTH   | ZUGFEST                               |
|                 | TOUGH  | ZÄH                                   |
| 72              | Deutsches Patent- und Markenamt DPMA   | 1.2.2000 (2.10h)                      |
|                 |  | 1.2.2009 (2:19h)                      |
| Publication     | JP61130424 AA  | 18.06.1986                            |
| Priority        | JP59-252985  | 29.11.1984                            |
| Application     | JP2911198459-252985  |                                       |
| Applicant       | KOBE STEEL LTD.  |                                       |
| Inventor        | ASHIDA, SHINZO   |                                       |
| Title           | PRODUCTION OF HEAT TREATMENT-OMISSION<br>HAVING EXCELLENT WORKABILITY  | N TYPE HIGH TENSION STEEL WIRE OR ROE |
| Info            |  |                                       |
| IPC             | C21D00952  |                                       |
| Composition nr. | 1  | Composite component -                 |
| Composition     | [weight-%]: $C:0.05-0.2*SI:0-1.0*MN:1-2.5*CR:0-1*MO:0-0.3*AL:0-0.15*NB:0-0.1*TI:0-0.1*ZR:0-0.3*REM:0-0.05*CA:0-0.003*NI:0-1*N+P+S:0-0.333*FE:REST$         |                                       |
| Keywords        | (english)  | (german)                              |
|                 | BAINITE  | BAINIT                                |

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|             | FERRITE  | FERRIT                            |
|-------------|--|-----------------------------------|
|             | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                   |
|             | MARTENSITE   | MARTENSIT                         |
|             | PLASTIC  | PLASTISCH                         |
|             | PRODUCTION   | HERSTELLUNG                       |
|             | TENSILE-STRENGTH   | ZUGFEST                           |
|             | USE  | VERWENDUNG                        |
|             | WIRE   | DRAHT                             |
|             |  |                                   |
| 73          | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                  |
| Publication | EP58016 C  | 14.05.1986                        |
| Priority    | JP11031  | 27.01.1981                        |
| Application | EP2701198282300412   | <u>'</u>                          |
| Applicant   | KABUSHIKI KAISHA KOBE SEIKO SHO  |                                   |
| Inventor    | YUTORI, TOSHIAKI/ OGAWA, RIKUO   |                                   |
| Title       | PROCESS FOR PRODUCING STEEL WIRE OR ROLL   | OS OF HIGH DUCTILITY AND STRENGTH |
| Info        | ROCESS FOR FRODUCING STEEL WIRE OR RODS OF THOM DOCTRETT AND STRENGTH  |                                   |
| IPC         | C21D00806  |                                   |
| Composition | C211000000   |                                   |
| nr.         | 1  | Composite component -             |
| Composition | [weight-%]: C : 0,2-0,4 * SI : 0-2 * MN : 0,5-2,5 * NB : 0-0,1 * V : 0-0,1 * TI : 0-0,3 * ZR : 0-0,3 *<br>+ S : 0-0,3 * CR : 0-2 * MO : 0-0,5 * NI : 0-8 * CU : 0-1 * AL : 0-0,1 * FE : REST |                                   |
| Keywords    | (english)  | (german)                          |
|             | FINE-GRAINED   | FEINKÖRNIG                        |
|             | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                   |
|             | PLASTIC  | PLASTISCH                         |
|             | PRODUCTION   | HERSTELLUNG                       |
|             | TENSILE-STRENGTH   | ZUGFEST                           |
|             | USE  | VERWENDUNG                        |
|             |  |                                   |
| 74          | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                  |
| Publication | US4406713 C  | 27.09.1983                        |
| Priority    | US246059   | 20.03.1981                        |
| Application | US20031981246059   |                                   |
| Applicant   | KABUSHIKI KAISHA KOBE SEIKO SHO  |                                   |
| Inventor    | YUTORI, TOSHIAKI/ OGAWA, RIKUO   |                                   |
| Title       | METHOD OF MAKING HIGH-STRENGTH, HIGH-TOUGHNESS STEEL WITH GOOD WORKABILITY   |                                   |
| Info        |  |                                   |
| IPC         | C21D00800000   |                                   |
|             |  |                                   |

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| Composition nr. | 1   | Composite component - |
|-----------------|---|-----------------------|
| Composition     | [weight-%]: $C:0.005-0.3*$ MN: $0.3-2.5*$ SI: $0-1.5*$ NB: $0-0.1+$ V: $0-0.15+$ TI: $0-0.3+$ ZR: $0-0.3*$ CR: $0-1+$ MO: $0-1+$ CU: $0-1+$ NI: $0-1.5*$ AL: $0-0.1+$ P: $0-0.2+$ CI: $0-0.02+$ CA: $0-0.003+$ S: $0-0.013*$ FE: REST |                       |
| Keywords        | (english)   | (german)              |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG       |
|                 | MARTENSITE  | MARTENSIT             |
|                 | PLASTIC   | PLASTISCH             |
|                 | PRODUCTION  | HERSTELLUNG           |
|                 | TENSILE-STRENGTH  | ZUGFEST               |
|                 | TOUGH   | ZÄH                   |
|                 | USE   | VERWENDUNG            |
|                 | WELDABLE  | SCHWEISSBAR           |
| 75              | Don't be David and Made and DDMA  | 1.2.2000 (2.101)      |
|                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| Publication     | EP72867 A   | 02.03.1983            |
| Priority        | US22877   | 20.02.1981            |
| Application     | EP0202198282900382.1  |                       |
| Applicant       | KAWASAKI STEEL CORP.  |                       |
| Inventor        | MORITA, MASAHIKO/ MANO, JUNICHI/ NISHIDA, MINORU UND MITERFINDER  |                       |
| Title           | PROCESS FOR MANUFACTURING HIGH-TENSILE HOT-ROLLED STEEL STRIP HAVING A LOW YIELD RATIO DUE TO ITS MIXED STRUCTURE   |                       |
| Info            | ]   |                       |
| IPC             | C21D00946   |                       |
| Composition nr. | 1   | Composite component - |
| Composition     | weight-% : C : 0,02-0,2 * SI : 0,05-2 * MN : 0,5-2 * CR : 0,3-1,5 * CU + NI + MO : 0-1 * B : 0-0,02 * NB + V + TI : 0-0,2 * SELTERD + CA : 0-0,05 * AL : 0-0,1 * P : 0-0,15 * S : 0-0,015 * FE : REST                                 |                       |
| Keywords        | (english)   | (german)              |
|                 | FERRITE   | FERRIT                |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG       |
|                 | MARTENSITE  | MARTENSIT             |
|                 | PLASTIC   | PLASTISCH             |
|                 | PRECIPITATION-HARDENING   | AUSSCHEIDUNGSH        |
|                 | PRODUCTION  | HERSTELLUNG           |
|                 | TENSILE-STRENGTH  | ZUGFEST               |
|                 |   | 1                     |
| 76              | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)      |
| Publication     | EP72867 A1  | 02.03.1983            |
| Priority        | JP22877/81  | 20.02.1981            |

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| Application     | EP0202198282900382   |                       |
|-----------------|--|-----------------------|
| Applicant       | KAWASAKI STEEL CORP.   |                       |
| Inventor        | MORITA, MASAHIKO; MANO, JUNICHI; NISHIDA, MINORU UND MITERFINDER   |                       |
| Title           | PROCESS FOR MANUFACTURING HIGH-TENSILE HOT-ROLLED STEEL STRIP HAVING A LOW YIELD RATIO DUE TO ITS MIXED STRUCTURE  |                       |
| Info            |  |                       |
| IPC             | C21D00946  |                       |
| Composition nr. | 1  | Composite component - |
| Composition     | [weight-%]: C:0,02-0.2 * SI:0,05-2 * MN:0.5-2 * 0,02 * NB + V + TI:0-0,2 * REM + CA:0-0,05 * AL  |                       |
| Keywords        | (english)  | (german)              |
|                 | AUSTENITE  | AUSTENIT              |
|                 | FERRITE  | FERRIT                |
|                 | HARD   | HART                  |
|                 | HEAT-TREATMENT   | WÄRMEBEHANDLUNG       |
|                 | TENSILE-STRENGTH   | ZUGFEST               |
|                 | USE  | VERWENDUNG            |
|                 | WELDABLE   | SCHWEISSBAR           |
|                 |  |                       |
| 77              | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |
| Publication     | US4348800 C  | 14.09.1982            |
| Priority        | US139873   | 14.04.1980            |
| Application     | US14041980139873   |                       |
| Applicant       | REPUBLIC STEEL CORP.   |                       |
| Inventor        | DEMIANCZUK, DIONISYJ/ MCLEAN, GREGORY/ I   | FRANKLIN, JOSEPH      |
| Title           | PRODUCTION OF STEEL PRODUCTS WITH MEDI<br>MANGANESE AND SUPERIOR SURFACE QUALIT  |                       |
| Info            |  |                       |
| IPC             | C22C03800000   |                       |
| Composition nr. | 1  | Composite component - |
| Composition     | (weight-%): C : 0.01-0.9 * MN : 0.1-1.75 * CU : 0-2 * P : 0-0.2 * S : 0-0.5 * SI : 0-3.5 * AL : 0-0.5     NB : 0-0.75 + TI : 0-0.75 + V : 0-0.75 + ZR : 0-0.75 * B : 0-0.075 * CR : 0-2 * NI : 0-3.5 * MO : 0-   * FE : REST |                       |
| Keywords        | (english)  | (german)              |
|                 | MAGNETIZABLE   | MAGNETISIERBAR        |
|                 | PLASTIC  | PLASTISCH             |
|                 | PRODUCTION   | HERSTELLUNG           |
|                 | SURFACE  | OBERFLÄCHE            |
|                 | TENSILE-STRENGTH   | ZUGFEST               |
|                 | TOUGH  | ZÄH                   |

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| 78                      | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)            |
|-------------------------|---|-----------------------------|
| Publication             | US4325751 C   | 20.04.1982                  |
| Priority                | SE790453  | 09.05.1979                  |
| Application             | US12051980148942  | "                           |
| Applicant               | SSAB SVENSKT STAL AKTIEBOLAG  |                             |
| Inventor                | JOSEFSSON, ERIK   |                             |
| Title                   | METHOD FOR PRODUCING A STEEL STRIP COME   | OSED OF A DUAL -PHASE STEEL |
| Info                    |   |                             |
| IPC                     | C21D00802   |                             |
| Composition nr.         | 1   | Composite component -       |
| Composition             | [weight-%]: C: 0.05-0.2 * SI: 0.5-2 * MN: 0.5-1.5 * CR: 0-1.5 * V: 0-0.15 * MO: 0-0.15 * TI: 0-0.04 * NB: 0-0.02 * FE: REST * S: 0-0.01 |                             |
| Keywords                | (english)   | (german)                    |
|                         | FINE-GRAINED  | FEINKÖRNIG                  |
|                         | HEAT-TREATMENT  | WÄRMEBEHANDLUNG             |
|                         | MARTENSITE  | MARTENSIT                   |
|                         | PLASTIC   | PLASTISCH                   |
|                         | PRODUCTION  | HERSTELLUNG                 |
|                         | TENSILE-STRENGTH  | ZUGFEST                     |
| 79                      | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)            |
| Publication             | EP40553 A   | 25.11.1981                  |
|                         | GB8016829   | 21.05.1980                  |
| Priority<br>Application | EP2105198181302260  | 21.03.1980                  |
| Applicant               | BRITISH STEEL CORP.   |                             |
|                         |   |                             |
| Inventor                | HUDD, ROGER/ JONES, ALUN  |                             |
| Title                   | PROCESS FOR PRODUCINGA DUAL-PHASE STEED   | L                           |
| Info                    | (21)00002   |                             |
| IPC                     | C21D00802   | 11                          |
| Composition<br>nr.      | 1   | Composite component -       |
| Composition             | [weight-%]: $C:0.03-0.25*MN:0.3-2.5*SI:0-1.5*MO:0-0.25+CR:0-2*FE:REST*S:0-0.02*P:0-0.02*N:0-0.015*NB+V+TI:0-0.01*CU+NI+SN:0-0.33$       |                             |
| Keywords                | (english)   | (german)                    |
|                         | HEAT-TREATMENT  | WÄRMEBEHANDLUNG             |
|                         | MARTENSITE  | MARTENSIT                   |
|                         | PLASTIC   | PLASTISCH                   |

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|                                      | TENSILE-STRENGTH   | ZUGFEST   |
|--------------------------------------|--|---|
|                                      |  | ,   |
| 80                                   | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)  |
| Publication                          | JP55161055 A   | 15.12.1980  |
| Priority                             | JP69308  | 02.06.1979  |
| Application                          | JP0206197954-69308   |   |
| Applicant                            | DAIDO TOKUSHUKO K.K.   |   |
| Inventor                             | NAKAMURA, SADAYUKI   |   |
| Title                                | LOW ALLOY SOFT-NITRIDING STEEL WITH SUPERIOR MACHINABILITY AND ITS PRODUCT   |   |
| Info                                 |  |   |
| IPC                                  | C22C03860  |   |
| Composition nr.                      | 1  | Composite component -   |
| Composition                          | [weight-%]: C : 0,1-0,35 * SI : 0-1,5 * MN : 0-2 * CR : 0,5-2,5 * S : 0,01-0.3 * TE : 0-0,1 * V + NI + ZR + TI : 0-0,5 * NI + MO + CU + W + CO : 0-2,22 * PB : 0-0.3 + BI : 0-0,2 + SE : 0-0.2 * FE : REST |   |
| Keywords                             | (english)  | (german)  |
|                                      | CASE-HARDENING   | EINSATZH  |
|                                      | MACHINEABLE  | ZERSPANBAR  |
|                                      | TENSILE-STRENGTH   | ZUGFEST   |
|                                      | USE  | VERWENDUNG  |
|                                      |  |   |
| 81                                   | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)  |
| Publication                          | EP19193 C  | 26.11.1980  |
| Priority                             | SE7904053  | 09.05.1979  |
| Application                          | EP0605198080102465   |   |
| Applicant                            | SSAB SVENSKT STAL AB   |   |
| Inventor                             | JOSEFSSON, ERIK  |   |
| Title                                | A METHOD OF MAKING STEEL STRIP WITH HIGH   | I STRENGTH AND FORMABILITY  |
| Info                                 |  |   |
| IPC                                  | C21D00802  |   |
|                                      |  |   |
|                                      | 1  | Composite component -   |
| nr.                                  | [weight-%]: C : 0,05-0,2 * SI : 0,5-2 * MN : 0,5-1,5 * 0-0,04 + NB : 0-0,02 * S : 0-0,01 * SELTERD + TE : (  | TCR: 0-1,5 + V: 0-0,15 + MO: 0-0,15 + TI  |
| Composition nr. Composition Keywords | [weight-%]: C:0,05-0,2 * SI:0,5-2 * MN:0,5-1,5 *   | TCR: 0-1,5 + V: 0-0,15 + MO: 0-0,15 + TI  |
| nr. Composition                      | [weight-%]: C:0,05-0,2 * SI:0,5-2 * MN:0,5-1,5 * 0-0,04 + NB:0-0,02 * S:0-0,01 * SELTERD + TE:(  | CR: 0-1,5 + V: 0-0,15 + MO: 0-0,15 + TI<br>-0,33 * AL: 0-0,03 * N: 0-0,006 * FE: RES'             |
| nr. Composition                      | [weight-%]: C : 0,05-0,2 * SI : 0,5-2 * MN : 0,5-1,5 * 0-0,04 + NB : 0-0,02 * S : 0-0,01 * SELTERD + TE : ( [english]  | CR: 0-1,5 + V: 0-0,15 + MO: 0-0,15 + TI<br>-0,33 * AL: 0-0,03 * N: 0-0,006 * FE: RES'<br>[german] |

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|             | PLASTIC  | PLASTISCH                                  |
|-------------|--|--|
|             | PRODUCTION   | HERSTELLUNG                                |
|             | TENSILE-STRENGTH   | ZUGFEST                                    |
|             |  |  |
| 82          | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                           |
| Publication | JP55145155 A   | 12.11.1980                                 |
| Priority    | JP51926  | 25.04.1979                                 |
| Application | JP2504197954-51926   | ,  |
| Applicant   | DAIDO TOKUSHUKO K.K.   |  |
| Inventor    | KATOU, TETSUO  |  |
| Title       | SUCTION VALVE  |  |
| Info        |  |  |
| IPC         | C22C03822  |  |
| Composition |  |  |
| nr.         | 1  | Composite component -                      |
| Composition | [weight-%]: C:0,1-0,6 * SI:0,1-2 * MN:0,2-2 * C  | R: 0,5-5,05 * MO: 0,1-2 * AL: 0-2 + TI: 0- |
| Composition | 1,5 * NI : 0-2 + W : 0-3 + V : 0-1 + NB : 0-1,5 * S : 0-   | 0,3 + PB : 0-0,1 + CA : 0-0,02 * FE : REST |
| Keywords    | (english)  | (german)                                   |
|             | CASE-HARDENING   | EINSATZH                                   |
|             | MACHINEABLE  | ZERSPANBAR                                 |
|             | SURFACE  | OBERFLÄCHE                                 |
|             | VALVE  | VENTIL                                     |
|             | WEAR/TEAR  | VERSCHLEISS                                |
|             |  |  |
| 83          | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                           |
| Publication | JP55141550 A   | 05.11.1980                                 |
| Priority    | JP47296  | 19.04.1979                                 |
| Application | JP1904197954-47296   | J.   |
| Applicant   | DAIDO TOKUSHUKO K.K.   |  |
| Inventor    | KATOU, TETSUO  |  |
| Title       | STRUCTURAL STEEL WITH LOW ANISOTROPY C<br>SUPERIOR MACHINABILITY, AND ITS MANUFAC  |  |
| Info        |  |  |
| IPC         | C22C03860  |  |
| Composition | 1  | <u> </u>                                   |
| nr.         | 1  | Composite component -                      |
|             | [weight_%]. C + 0.06 * SI + 0.25 * MN + 0.2 * S + 0.   | 0.4 * TF : 0.0 1 * NI + CII + CR + MO + AI |
| Composition | [weight-%]: $C: 0.0.6*SI: 0.2.5*MN: 0.2*S: 0.0.4*TE: 0.0.1*NI+CU+CR+MO+AI.+W+V+CO+NB+TI+TA+ZR+B: 0.2.22+PB+BI+SE+CA: 0.0.33*O: 0.0.003*FE: RFST$ |  |
| Keywords    | (english)  | (german)                                   |
|             | MACHINEABLE  | ZERSPANBAR                                 |

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|                 | PRODUCTION  | HERSTELLUNG             |
|-----------------|---|-------------------------|
|                 |   |                         |
| 84              | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)        |
| Publication     | JP55089432 AA   | 07.07.1980              |
| Priority        | JP53-159821   | 27.12.1978              |
| Application     | JP2712197853-159821   | ·                       |
| Applicant       | SHIN NIPPON SEITETSU K.K.   |                         |
| Inventor        | EGUCHI, NAOKI   |                         |
| Title           | PREPARATION OF HIGH TENSILE WIRE MATERIAL AND BAR STEEL WITH EXCELLENT STRAIN AND CORROSION CRACK RESISTANCE  |                         |
| Info            |   |                         |
| IPC             | C21D00952   |                         |
| Composition nr. | 1   | Composite component -   |
| Composition     | weight-% ; C : 0.02-0.2 * SI : 0.03-1.2 * MN : 0.3-2.5 * AL : 0-0.099 * NB + V + ZR : 0-0.399 * CU : 0-0.5 * TI : 0-0.25 * B : 0-0.005 * NI + CR + MO : 0-1.199 * N + P + S : 0-0.333 * FE : RES' |                         |
| Keywords        | (english)   | (german)                |
|                 | CORROSION-RESISTING   | KORROSIONSBEST          |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG         |
|                 | PRODUCTION  | HERSTELLUNG             |
|                 | TENSILE-STRENGTH  | ZUGFEST                 |
|                 | USE   | VERWENDUNG              |
|                 | WIRE  | DRAHT                   |
| 85              | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)        |
| Publication     | JP55065324 A  | 16.05.1980              |
| Priority        | JP137201  | 07.11.1978              |
| Application     | JP0711197853-137201   |                         |
| Applicant       | SUMITOMO KINZOKU KOGYO K.K.   |                         |
| Inventor        | UNO, KATSUHIRO  |                         |
| Title           | MANUFACTURE OF LOW ALLOY STEEL EXCELL   | ENT IN COLD WORKABILITY |
| Info            |   |                         |
| IPC             | C21D00600   |                         |
| Composition nr. | 1   | Composite component -   |
| Composition     |   |                         |
| Keywords        | (english)   | (german)                |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG         |
|                 | PLASTIC   | PLASTISCH               |

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|                    | PRODUCTION   | HERSTELLUNG                                   |
|--------------------|--|---|
|                    | TOUGH  | ZÄH   |
|                    | ]  |   |
| 86                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                              |
| Publication        | DE2917287 A  | 08.11.1979                                    |
| Priority           | JP75445  | 23.06.1978                                    |
| Application        | DE27041979P2917287   | -11   |
| Applicant          | NETUREN CO.LTD.  |   |
| Inventor           | НІЛКАТА,ТОЅНЮ  |   |
| Title              | KALTVERFORMBARER STAHL   |   |
| Info               |  |   |
| IPC                | 18C00C21D00101800  |   |
| Composition<br>nr. | 1  | Composite component -                         |
| Composition        | [weight-%]: C : 0,1-1,1 * MN : 0.3-2 * SI : 0,15-2,5 * S : 0-0,04 * P : 0-0,04 * B : 0-0,0025 * CR : 0                 |   |
| Keywords           | (english)  | (german)                                      |
|                    | ELASTIC  | ELASTISCH                                     |
|                    | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                               |
|                    | PLASTIC  | PLASTISCH                                     |
|                    | SPRINGS  | FEDERN  |
|                    | TENSILE-STRENGTH   | ZUGFEST                                       |
|                    |  |   |
| 87                 | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                              |
| Publication        | DE2917287 C2   | 08.11.1979                                    |
| Priority           | JP49930/78   | 28.04.1978                                    |
| Application        | DE270419792917287  |   |
| Applicant          | Neturen Co. Ltd.   |   |
| Inventor           | Hijikata, Toshio; Kawasaki, Kazuhiro   |   |
| Title              | Verfahren zum Herstellen von Schraubenfedern, Torsio   | nsstäben oder dergleichen aus Federstahldraht |
| Info               |  |   |
| IPC                | C21D009/02   |   |
| Composition<br>nr. | 1  | Composite component -                         |
| Composition        | (weight-%): C : 0.1-1,1 * MN : 0.3-2 * SI : 0.15-2,5 * S + N + P : 0-0,333 * CR + MO + V + B + NB : 0-1,11 * FE : REST |   |
| Keywords           | (english)  | (german)                                      |
|                    | HARD   | HART  |
|                    | HEAT-TREATMENT   | WÄRMEBEHANDLUNG                               |
|                    | PLASTIC  | PLASTISCH                                     |

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|                           | PRODUCTION   | HERSTELLUNG                               |
|---------------------------|--|---|
|                           | SPRINGS  | FEDERN                                    |
|                           | TENSILE-STRENGTH   | ZUGFEST                                   |
|                           | TOUGH  | ZÄH                                       |
|                           | USE  | VERWENDUNG                                |
|                           | WIRE   | DRAHT                                     |
|                           |  |   |
| 88                        | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                          |
| Publication               | JP52018419 A   | 12.02.1977                                |
| Priority                  | JP94601  | 02.08.1975                                |
| Application               | JP0208197550-94601   |   |
| Applicant                 | SHIN NIPPON SEITETSU K. K.   |   |
| Inventor                  | WADA, TADAYOSHI  |   |
| Title                     | METHOD OF MANUFACTURING SI-CONT.STEEL  |   |
| Info                      | 1  |   |
| IPC                       | C21D00600  |   |
| Composition               |  |   |
| nr.                       | 1  | Composite component -                     |
| Composition               | (weight-% : C : 0.03-0.8 * SI : 0.05-1 * MN : 0.2-2 * P : 0-0.06 * S : 0-0.06 * AL + TI + CU + CR + NI + B + NB + V + MO + ZR : 0-5.55 * FE : REST |   |
| Keywords                  | (english)  | (german)                                  |
|                           | PRODUCTION   | HERSTELLUNG                               |
|                           | ]  |   |
| 89                        | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)                          |
| Publication               | JP52009619 A   | 25.01.1977                                |
| Priority                  | JP85839  | 15.07.1975                                |
| Application               | JP1507197550-85839   | 1   |
| Applicant                 | SHIN NIPPON SEITETSU K. K.   |   |
| Inventor                  | MORITA, KAZU   |   |
| Title                     | LOW ALLOY STEEL HAVING EXCELLENT STZRESS RELIEVING TEMPER BRITTLENESS AT PARTS AFFECTED BY WELDING HEAT  |   |
| _                         |  |   |
| Info                      | C22C03800  |   |
| Info<br>IPC               | C22C03800  |   |
| IPC                       |  | Composite component -                     |
| IPC<br>Composition<br>nr. | 1 [weight-%]: C: 0.05-0.25 * SI: 0,I-1 * MN: 0,3-2 *   | CU: 0-0,6 + NI: 0-6 + CR: 0-3 + MO: 0-2 + |
| IPC<br>Composition        | [weight-%]: C: 0.05-0.25 * SI: 0,1-1 * MN: 0.3-2 * V: 0-0,1 + NB: 0-0,1 + AL: 0-0,1 + TI: 0-0,1 + ZR:  | CU: 0-0,6 + NI: 0-6 + CR: 0-3 + MO: 0-2 + |

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|                    | WELDABLE  | SCHWEISSBAR  |
|--------------------|---|--|
|                    |   | ,  |
| 90                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)   |
| Publication        | JP52009620 A  | 25.01.1977   |
| Priority           | JP85840   | 15.07.1975   |
| Application        | JP1507197550-85840  | ,  |
| Applicant          | SHIN NIPPON SEITETSU K. K.  |  |
| Inventor           | MORITA, KAZU  |  |
| Title              | LOW ALLOY STEEL HAVING EXCELLENT STRESS RELIEVING TEMPER BRITTLENESS AT PARTS AFFECTED BY WELDING HEAT  |  |
| Info               |   | The state of the s |
| IPC                | C22C03800   |  |
| Composition<br>nr. | 1   | Composite component -  |
| Composition        | [weight-%]: C: 0.05-0.25 * SI: 0.1-1 * MN: 0.3-2 * CU: 0-0.6 + NI: 0-6 + CR: 0-3 + MO: 0-2<br>V: 0-0.1 + NB: 0-0.1 + AL: 0-0.1 + TI: 0-0.1 + ZR: 0-0.1 + B: 0-0.006 * FE: REST * N: 0-0.004<br>* SELTERD: 0-0.3 * S + P: 0-0.33 |  |
| Keywords           | (english)   | (german)   |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG  |
|                    | WELDABLE  | SCHWEISSBAR  |
|                    |   |  |
| 91                 | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)   |
| Publication        | US3944442 C   | 16.03.1976   |
| Priority           | US492739  | 29.07.1974   |
| Application        | US29071974492739  |  |
| Applicant          | THE INTERNATIONAL NICKEL CO.INC.  |  |
| Inventor           | DONACHIE,STEPHEN  |  |
| Title              | AIR HARDENABLE,FORMABLE STEEL   |  |
| Info               |   |  |
| IPC                | 18C00C21D00701400   |  |
| Composition<br>nr. | 1   | Composite component -  |
| Composition        |   |  |
| Keywords           | (english)   | (german)   |
|                    | HEAT-TREATMENT  | WÄRMEBEHANDLUNG  |
|                    | MARTENSITE  | MARTENSIT  |
|                    | PLASTIC   | PLASTISCH  |
|                    | PRODUCTION  | HERSTELLUNG  |
|                    | TENSILE-STRENGTH  | ZUGFEST  |

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|   | TOUGH   | ZÄH   |  |
|---|---|---|--|
|   | WELDABLE  | SCHWEISSBAR                                 |  |
|   |   |   |  |
| 92  | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)                            |  |
| Publication                                   | GB1361977 C   | 31.07.1974                                  |  |
| Priority                                      | JP45021   | 25.05.1970                                  |  |
| Application                                   | GB1905197115895/71  | ,   |  |
| Applicant                                     | SUMITOMO KINZOKU KOGYO K.K.   |   |  |
| Inventor                                      |   |   |  |
| Title   | PROCESS FOR MANUFACTURE OF STRONG TOUGH STEEL PLATES  |   |  |
| Info  |   |   |  |
| IPC   | 18C00C21D00701300   |   |  |
| Composition                                   |   |   |  |
| nr.   |   |   |  |
|   | [weight-%]: C:0.06-0.3 * SI:0-1.5 * MN:0.5-4 * NB:0-0.2 * V:0-0.3 * MO:0-1 * TI:0-0.2 *           |   |  |
| Composition                                   | tion   ZR:0-0,2 * TA:0-0,1 * CR:0-3 * B:0-0,01 * CU:0-1 * NI:0-2 * FE:REST * P + S + 0-0,33       |   |  |
| Keywords                                      | (english)   | (german)                                    |  |
|   | PRECIPITATION-HARDENING   | AUSSCHEIDUNGSH                              |  |
|   | PRODUCTION  | HERSTELLUNG                                 |  |
|   | TENSILE-STRENGTH  | ZUGFEST                                     |  |
|   | TOUGH   | ZÄH   |  |
|   | WELDABLE  | SCHWEISSBAR                                 |  |
| 93  | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)                            |  |
| Publication                                   | FR2205574 C   | 31.05.1974                                  |  |
| Priority                                      | JP125001  | 13.12.1972                                  |  |
| Application                                   | FR071119737339545   |   |  |
| Applicant                                     | KOBE STEEL LTD.   |   |  |
| Inventor                                      | YAMAKOSHI,NOBORU/MINAMI,TOSHIHIRO/SOMEKAWA,SINITIRO/U.MITERF.                                     |   |  |
| Title   | PROCEDE DE TRAITEMENT DES ACIERS  |   |  |
|   | I NOCEDE DE INATEMENT DES ACIERS  |   |  |
|   |   |   |  |
| Info  | 18C00C21D00701300   |   |  |
| Info<br>IPC                                   | 18C00C21D00701300   |   |  |
| Info<br>IPC<br>Composition                    |   | Composite component -                       |  |
| Info<br>IPC<br>Composition<br>nr.             |   |   |  |
| Info IPC Composition nr. Composition Keywords | 1<br>[weight-%]: C:0.1-0.6 * SI:0-1 * MN:(0)-2 * NI:  |   |  |
| Info IPC Composition nr. Composition          | 1<br>[weight-%]: C: 0.1-0.6 * SI: 0-1 * MN: (0)-2 * NI: 0-0.5 * FE: REST * CU + P + S + N: 0-0.33 | 0-4 * CR : 0-2 * MO : 0-1 * B : 0-0,05 * NB |  |

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|             | MARTENSITE MARTENSIT   |                       |  |  |
|-------------|--|-----------------------|--|--|
|             | PLASTIC  | PLASTISCH             |  |  |
|             | PRODUCTION   | HERSTELLUNG           |  |  |
|             | SURFACE  | OBERFLÄCHE            |  |  |
|             | TENSILE-STRENGTH   | ZUGFEST               |  |  |
|             | TOUGH  | ZÄH                   |  |  |
|             |  |                       |  |  |
| 94          | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |  |  |
| Publication | US3403988 C  | 01.10.1968            |  |  |
| Priority    | US397273   | 17.09.1964            |  |  |
| Application | US17091964397273   |                       |  |  |
| Applicant   | E.I.DU PONT DE NEMOURS AND CO.   |                       |  |  |
| Inventor    | CARTER,GILES   |                       |  |  |
| Title       | CHROMIZED METAL SUBSTRATE  |                       |  |  |
| Info        |  |                       |  |  |
| IPC         | 40B00C22C039014X0  |                       |  |  |
| Composition |  |                       |  |  |
| nr.         | 1  | Composite component - |  |  |
| Composition | [weight-%]: TI + NB + TA + ZR + V : (0)-0.2 * CR + MO + W : (0)-2 * C + MN + SI : 0-2.22 * P<br>+ S + N : 0-0.33 * FE : REST   |                       |  |  |
| Keywords    | (english)  | (german)              |  |  |
|             | ARMATURE   | ARMATUR               |  |  |
|             | CORROSION-RESISTING  | KORROSIONSBEST        |  |  |
|             | PRODUCTION   | HERSTELLUNG           |  |  |
|             | SPRINGS  | FEDERN                |  |  |
|             | SURFACE  | OBERFLÄCHE            |  |  |
|             |  |                       |  |  |
| 95          | Deutsches Patent- und Markenamt DPMA   | 1.2.2009 (2:19h)      |  |  |
| Publication | US3403988 C  | 01.10.1968            |  |  |
| Priority    | US397273 17.09.1964  |                       |  |  |
| Application | US17091964397273   |                       |  |  |
| Applicant   | E.I.DU PONT DE NEMOURS AND CO.   |                       |  |  |
| Inventor    | CARTER, GILES  |                       |  |  |
| Title       | CHROMIZED METAL SUBSTRATE  |                       |  |  |
| Info        |  |                       |  |  |
| IPC         | 40B00C22C0390I4X0  |                       |  |  |
| Composition |  |                       |  |  |
| nr.         |  | Composite component a |  |  |
| Composition | (Composite material [%]: KERN<br>Component b   weight-%]: TI + NB + TA + ZR + V : (0)-0,2 * CR + MO + W : (0)-2 * C + MN +<br>SI : 0-2,22 * P + S + N : 0-0,33 * FE : REST |                       |  |  |

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| ARMATUR  | Keywords    | (english)  | (german)              |  |
|--|-------------|--|-----------------------|--|
| CLADDING-MATERIAL   PLATTIERW  |             | ARMATURE   |                       |  |
| PRODUCTION     FIERTELLUNG   |             | CLADDING-MATERIAL  |                       |  |
| SPRINGS  |             | CORROSION-RESISTING  | KORROSIONSBEST        |  |
| 96   |             | PRODUCTION   | HERSTELLUNG           |  |
| Publication   DE1183695 B  |             | SPRINGS  | FEDERN                |  |
| Publication   DE1183695 B  |             |  |                       |  |
| Priority   DE17062   DE1 | 96          | Deutsches Patent- und Markenamt DPMA                                 | 1.2.2009 (2:19h)      |  |
| Application   DT17021954D17062   | Publication | DE1183695 B  | 17.12.1964            |  |
| Applicant   DEUTSCHE EDELSTAHLWERKE AG   | Priority    | DE17062  | 17.02.1954            |  |
| Inventor   BUNGARDT.KARI./KUNZE.ERNST  | Application | DT17021954D17062   | ,                     |  |
| VERWENDUNG VON EINSATZBAUSTAEHLEN ALS WERKSTOFF FUER GEGEN-STAENDE, DIE NACH WAERMEBEHANDLUNGEN EINE BESCHLEUNIGTE UM-WANDLUNG VON AUSTENIT IN FERRIT UND PERLIT ERFORDERN   Info  | Applicant   | DEUTSCHE EDELSTAHLWERKE AG   |                       |  |
| DIE NACH WAERMEBEHANDLUNGEN EINE BESCHLEUNIGTE UM- WANDLUNG VON AUSTENT IN FERRIT UND PERLIT ERFORDERN     Info  | Inventor    | BUNGARDT,KARL/KUNZE,ERNST  |                       |  |
| IPC  | Title       | DIE NACH WAERMEBEHANDLUNGEN EINE BESCHLEUNIGTE UM- WANDLUNG VON      |                       |  |
| Composition   Composition   Composition   Composition   Composition   Composition   Composition   Composition   SI + MN + P + S : 0.2.2 * FE : REST   (weight-%): C : (0)-0.25 * CR : (0.9-2.1 + NI : 1-5.25 * MO : 0-0.3 * TI + NB + TA + ZR : (0.01-0.15 * NE + NB + TA + ZR : (0.01-0.15 * NE + NB + TA + ZR : (0.01-0.15 * NE + NB + TA + ZR : (0.01-0.15 * NE + NB + TA + ZR : (0.01-0.15 * NE + NB + TA + ZR : (0.01-0.15 * NE + NB + TA + ZR : (0.01-0.15 * NE + TA + ZR : (0.01-0.15 | Info        |  |                       |  |
| Deutsches Patent- und Markenamt DPMA   1.2.2009 (2:19h)  | IPC         | 40B00C22C03902000  |                       |  |
| SI + MN + P + S : 0-2.2 * FE : REST  |             | 1  | Composite component - |  |
| PRECIPITATION-HARDENING  | Composition |  |                       |  |
| USE  | Keywords    | (english)  | (german)              |  |
| 97   |             | PRECIPITATION-HARDENING  | AUSSCHEIDUNGSH        |  |
| Publication         DE2643 X         III.09.1952           Priority         DE2643         I3.10.1944           Application         DT13101944G2643           Applicant         GOETZEWERKE FRIEDRICH GOETZE AG           Inventor         ADEY,CARI,MUELLER,MAX/BARDENHEUER,PETER/UMITERF.           Title         STAHL, FUER HOHLSCHAUFELN FUER GASTURBINEN UND OBERFLAECHENBEHANDLUNG DIESER SCHAUFELN           Info         FERRITISCH*TD-4.C           IPC         40800C22C039054H0           Composition In.         Composite component -           Composition         Inveight-%; C: (0)-0.2 * TI+ NB + MO + W + V + TA + ZR: (0)-0.8 * P + S + N: 0-0,33 * SI + MN: 0-2.22 * CR: 0-5 * FE: REST   |             | USE  | VERWENDUNG            |  |
| Publication   DE2643 X   |             |  |                       |  |
| Priority   DE2643   I3.10.1944   | 97          | Deutsches Patent- und Markenamt DPMA                                 | 1.2.2009 (2:19h)      |  |
| Application   DT13101944G2643  | Publication | DE2643 X   | 11.09.1952            |  |
| Applicant   GOETZEWERKE FRIEDRICH GOETZE AG  | Priority    | DE2643   | 13.10.1944            |  |
| Inventor   | Application | DT13101944G2643  |                       |  |
| Title         STAHL FUER HOHLSCHAUFELN FUER GASTURBINEN UND OBERFLAECHENBEHANDLUNG DIESER SCHAUFELN           Info         FERRITISCH*TD-4.C           IPC         40800C22C039054H0           Composition in.         Composition in.           Composition in.         Weight-%]: C : (0)-0.2 * TI + NB + MO + W + V + TA + ZR : (0)-0.8 * P + S + N : 0-0.33 * SI + MN : 0-2.22 * CR : 0.5 * FE : REST  | Applicant   | GOETZEWERKE FRIEDRICH GOETZE AG                                      |                       |  |
| DIESER SCHAUFELN    Info   | Inventor    | ADEY,CARL/MUELLER,MAX/BARDENHEUER,PETER/U.MITERF.                    |                       |  |
| IPC  | Title       | STAHL FUER HOHLSCHAUFELN FUER GASTURBINEN UND OBERFLAECHENBEHANDLUNG |                       |  |
| Composition nr.         1         Composite component -           Composition         [weight-%]: C : (0)-0,2 * TI + NB + MO + W + V + TA + ZR : (0)-0,8 * P + S + N : 0-0,33 * SI + MN : 0-2,22 * CR : 0.5 * FE : REST  | Info        | FERRITISCH*TI>4.C  |                       |  |
| nr.   Composition   [weight-%]: C : (0)-0.2 * TI + NB + MO + W + V + TA + ZR : (0)-0.8 * P + S + N : 0-0.33 * SI + MN : 0-2.22 * CR : 0-5 * FE : REST  | IPC         | 40B00C22C039054H0  |                       |  |
| MN:0-2.22 * CR:0-5 * FE: REST  |             | 1  | Composite component - |  |
| Keywords (english) (german)  | Composition |  |                       |  |
|  | Keywords    | (english)  | (german)              |  |

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|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG                |  |
|-----------------|---|--------------------------------|--|
|                 | PRODUCTION  | HERSTELLUNG                    |  |
|                 | TURBINE   | TURBINE                        |  |
|                 |   |                                |  |
| 98              | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)               |  |
| Publication     | DE958168 C  | 04.10.1951                     |  |
| Priority        | DE1566  | 24.04.1950                     |  |
| Application     | DT24041950R1566   | ,                              |  |
| Applicant       | PHOENIX-RHEINROHR AG. VEREINIGTE HUETTEN-UND ROEHRENWERKE                               |                                |  |
| Inventor        | BAERLECKEN,EWALD  |                                |  |
| Title           | SCHWEISSDRAEHTE UND-ELEKTRODEN FUER I   | AUGENBESTAENDIGE SCHWEISSNAEHT |  |
| Info            |   |                                |  |
| IPC             | 49H00B23K03600100   |                                |  |
| Composition     |   |                                |  |
| nr.             |   |                                |  |
| Composition     | weight-%]: C: (0)-0.25 * TI + TA + NB + ZR + V: (0)-4 * MN + SI + MO + W + CR + CU: 0-3 |                                |  |
| Keywords        | (english)   | (german)                       |  |
|                 | CORROSION-RESISTING   | KORROSIONSBEST                 |  |
|                 | ELECTRODE   | ELEKTRODE                      |  |
|                 | FILLER-MATERIAL   | SCHWEISSZUSATZW                |  |
|                 | HEAT-TREATMENT  | WÄRMEBEHANDLUNG                |  |
|                 | USE   | VERWENDUNG                     |  |
|                 |   |                                |  |
| 99              | Deutsches Patent- und Markenamt DPMA  | 1.2.2009 (2:19h)               |  |
| Publication     | DE945094 C  | 29.03.1951                     |  |
| Priority        | DE36456   | 10.03.1949                     |  |
| Application     | DT10031949P36456  |                                |  |
| Applicant       | PHOENIX-RHEINROHR AKTIENGESELLSCHAFT VEREINIGTE HUETTEN- UND ROEHRENWERKE               |                                |  |
| Inventor        | BAERLECKEN,EWALD  |                                |  |
| Title           | LAUGENBESTAENDIGER STAHL  |                                |  |
| Info            | IDMITACH302618  |                                |  |
| IPC             | 18D00C22C00204000   |                                |  |
| Composition nr. |   |                                |  |
| Composition     |   |                                |  |
| Keywords        | (english)   | (german)                       |  |
| J               | CORROSION-RESISTING   | KORROSIONSBEST                 |  |
|                 |   |                                |  |

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| 100   | Deutsches Patent- und Markenamt DPMA                                      | 1.2.2009 (2:19h)   |           |
|---|---|--|-----------|
| Publication                                   | DE724322 C  | 09.07.1942   |           |
| Priority                                      | DE96422   | 09.10.1937   |           |
| Application                                   | DT09101937G96422  |  |           |
| Applicant                                     | GUTEHOFFNUNGSHUETTE AG  |  |           |
| Inventor                                      | HAUTTMANN,HUBERT  |  |           |
| Title   | STAHL FUER NACH DEM KALTSPRITZVERFAHR<br>MIT HOHER ZAEHIGKEIT             | EN HERZUSTELLENDE GEGENSTAE  | ENDE      |
| Info  |   |  |           |
| IPC   | 18D00C22C00207000   |  |           |
| Composition nr.                               | Composite component -   |  |           |
| Composition                                   | [weight-%]: C: (0)-0,9 * S: 0,075-4 * MN: 1-2 * V - SI: 0-2,22 * FE: REST | + NI + CR + MO + NB + ZR + CU : (  | )-2 * P · |
| Keywords                                      | (english)   | (german)   |           |
|   | MACHINEABLE   | ZERSPANBAR   |           |
|   | TENSILE-STRENGTH  | ZUGFEST  |           |
|   | TOUGH   | ZÄH  |           |
|   | USE   | VERWENDUNG   |           |
|   |   |  |           |
| 101   | Deutsches Patent- und Markenamt DPMA                                      | 1.2.2009 (2:19h)   |           |
| Publication                                   | DE18926 N   |  |           |
| Priority                                      |   |  |           |
| Application                                   |   |  |           |
| Applicant                                     | STAHL-EISEN-LISTE   |  |           |
| Inventor                                      | STE 56 V  |  |           |
| oni i   | FEINKORNSTAHL MIT RE >= 550 N/MM2   |  |           |
| Title   | FEINKORNSTAHL MIT RE >= 550 N/MM2   |  |           |
|   | FEINKORNSTAHL MIT RE >= 550 N/MM2  VERGUETET                              |  |           |
| Title<br>Info<br>IPC                          |   |  |           |
| Info  |   | Composite component -  |           |
| Info<br>IPC<br>Composition<br>nr.             | VERGUETET   | 7 * P : 0-0.03 * S : 0-0.03 * N : 0-0.02 *   |           |
| Info IPC Composition nr. Composition          | VERGUETET   | 7 * P : 0-0.03 * S : 0-0.03 * N : 0-0.02 *   |           |
| Info IPC Composition nr. Composition          | VERGUETET   | 7 * P : 0-0,03 * S : 0-0,03 * N : 0-0,02 * V : 0-0,2 * B : 0-0,002 * NB : 0-0,1 * ZR |           |
| Info IPC Composition nr. Composition          | VERGUETET   | 7 * P : 0-0,03 * S : 0-0,03 * N : 0-0,02 * V : 0-0,2 * B : 0-0,002 * NB : 0-0,1 * ZR |           |
| Info IPC Composition nr. Composition Keywords | VERGUETET   | 7 * P : 0-0,03 * S : 0-0,03 * N : 0-0,02 * V : 0-0,2 * B : 0-0,002 * NB : 0-0,1 * ZR |           |

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| Application     |  |                       |
|-----------------|--|-----------------------|
| Applicant       | STAHL-EISEN-LISTE  |                       |
| Inventor        | STE 63 V   |                       |
| Title           | FEINKORNSTAHL MIT RE >= 620 N/MM2  |                       |
| Info            | EIGENSCHAFTEN NACH WBL 094. VERGUETET.   |                       |
| IPC             |  |                       |
| Composition nr. | 1  | Composite component - |
| Composition     | weight-% ; C : (0)-0.19 * SI : 0.3-0.8 * MN : 0.7-1.7 * P : 0-0.03 * 1 * CU : 0-1,4 * MO : 0-6 * NI : 0-1 * TI : 0-0,2 * V : 0-0.2 * B : 0-FE : REST |                       |
| Keywords        | (english)  | (german)              |